SAMSUNG

User Manual

PL170/PL171

This user manual includes detailed usage instructions for your camera. Please read this manual thoroughly.

Click a topic

- Basic troubleshooting
- Quick reference
- Contents
- Basic functions
- Extended functions
- Shooting options
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Health and safety information

Always comply with the following precautions and usage tips to avoid dangerous situations and ensure peak performance of your camera.

Warning—situations that could cause injury to yourself or others

Do not disassemble or attempt to repair your camera.
This may result in electric shock or damage to the camera.

Do not use your camera near flammable or explosive gases and liquids.
This may cause a fire or explosion.

Do not insert flammable materials into the camera or store these materials near the camera.
This may cause a fire or electric shock.

Do not handle your camera with wet hands.
This may result in electric shock.

Prevent damage to subjects' eyesight.
Do not use the flash in close proximity (closer than 1 m/3 ft) to people or animals. If you use the flash too close to your subject's eyes, this can cause temporary or permanent eyesight damage.

Keep your camera away from small children and pets.
Keep your camera and all accessories out of the reach of small children and animals. Small parts may cause choking or serious injury if swallowed. Moving parts and accessories may present physical dangers as well.

Do not expose the camera to direct sunlight or high temperatures for an extended period of time.
Prolonged exposure to sunlight or extreme temperatures can cause permanent damage to your camera's internal components.

Avoid covering the camera or charger with blankets or clothes.
The camera may overheat, which may distort the camera or cause a fire.

If liquid or foreign objects enter your camera, immediately disconnect all power sources, such as the battery or charger, and then contact a Samsung service center.

Caution—situations that could cause damage to your camera or other equipment

Remove the batteries from your camera when storing it for an extended period of time.
Installed batteries may leak or corrode over time and cause serious damage to your camera.

Use only authentic, manufacturer-recommended, Lithium-ion replacement batteries. Do not damage or heat the battery.
This may cause a fire or personal injuries.

Use only Samsung-approved batteries, chargers, cables and accessories.
- Unauthorized batteries, chargers, cables or accessories can cause batteries to explode, damage your camera, or cause injury.
- Samsung is not responsible for damages or injuries caused by unapproved batteries, chargers, cables or accessories.

Do not use batteries for unintended purposes.
This may cause a fire or electric shock.

Do not touch the flash while it fires.
The flash is very hot when fired and may burn your skin.

When you use AC charger, turn off the camera before you disconnect the power to the AC charger.
Failing to do so may result in fire or electric shock.

Disconnect chargers from power sources when not in use.
Failing to do so may result in fire or electric shock.

Do not use a damaged power supply cord, plug, or loose outlet when you charge batteries.
This may cause a fire or electric shock.

Do not allow the AC charger to come in contact with the +/- terminals on the battery.
This may cause a fire or electric shock.

Do not force the camera's parts or apply pressure to the camera.
This may cause your camera to malfunction.

Exercise caution when you connect cables or adapters and install batteries and memory cards.

If you force the connectors, improperly connect cables, or improperly install batteries and memory cards, you can damage ports, connectors, and accessories.

Keep cards with magnetic strips away from the camera case.

Information stored on the card may be damaged or erased.

Never use a damaged charger, battery, or memory card.

This may result in electric shock or camera malfunction or cause a fire.

Check that the camera is operating properly before use.

The manufacturer takes no responsibility for any loss of files or damages that may result from camera malfunction or improper use.

You must plug the end of the cable with the indicator light (▲) into your camera.

If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.

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Outline of the User Manual

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Learn about your camera's layout, icons, and basic functions for shooting.

Extended functions 31

Learn how to capture a photo, record a video, and voice memo by selecting a mode.

Shooting options 46

Learn how to set the options in Shooting mode.

Playback/Editing 68

Learn how to play back photos, videos, or voice memos and edit photos or videos. Also, learn how to connect your camera to your computer, photo printer, TV, or HDTV.

Settings 93

Refer to options to configure your camera's settings.

Appendixes 100

Get information about error messages, specifications, and maintenance.

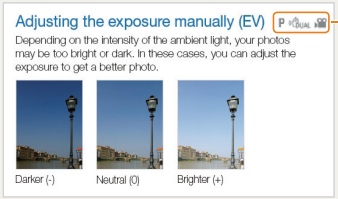
Indicators used in this manual

Shooting mode	Indicator
Smart Auto	
Auto	AUTO
Program	P
DUAL IS	
Beauty Shot	
Night	
Scene	SCN
Movie	

Shooting mode icons

These icons indicate that a function is available in the corresponding modes. The **SCN** mode may not support functions for all scenes.

For example:



Available in Program, DUAL IS, and Movie modes

Icons used in this manual

Icon	Function
	Additional information
	Safety warnings and precautions
[ ]	Camera buttons. For example, [**Shutter**] represents the shutter button.
( )	Page number of related information
→	The order of options or menus you must select to perform a step; for example: Select **Shooting** → **Photo Size** (represents Select **Shooting**, and then select **Photo Size**).
*	Annotation

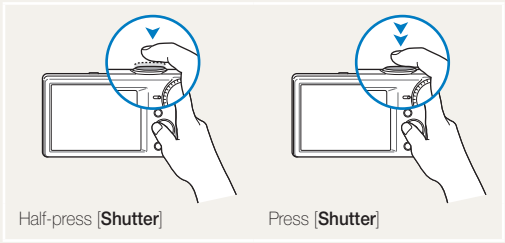
Abbreviations used in this manual

Abbreviation	Definition
ACB	Auto Contrast Balance
AEB	Auto Exposure Bracket
AF	Auto Focus
DIS	Digital Image Stabilization
DPOF	Digital Print Order Format
EV	Exposure Value
ISO	International Organization for Standardization
OIS	Optical Image Stabilization
WB	White Balance

Expressions used in this manual

Pressing the shutter

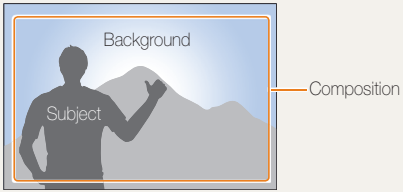
- Half-press [**Shutter**]: press the shutter halfway down
- Press [**Shutter**]: press the shutter all the way down



Half-press [**Shutter**] Press [**Shutter**]

Subject, background, and composition

- **Subject**: the main object in a scene, such as a person, animal, or still life
- **Background**: the objects around the subject
- **Composition**: the combination of a subject and background



Exposure (Brightness)

The amount of light that enters your camera determines the exposure. You can alter the exposure with shutter speed, aperture value, and ISO sensitivity. By altering the exposure, your photos will be darker or lighter.

Normal exposure

Overexposure (too bright)

Basic troubleshooting

Learn to solve common problems by setting shooting options.

	The subject's eyes appear red.	This is caused by a reflection from the camera flash. • Set the flash option to **Red-eye** or **Red-eye Fix**. (p. 50) • If the photo has already been captured, select **Red-eye Fix** in the edit menu. (p. 81)
	Photos have dust spots.	If dust particles are present in the air, you may capture them in photos when you use the flash. • Turn off the flash or avoid capturing photos in a dusty place. • Set ISO sensitivity options. (p. 51)
	Photos are blurred.	This may be caused if you capture photos in low light conditions or hold the camera incorrectly. • Use the OIS function or half-press [**Shutter**] to ensure the subject is focused. (p. 29) • Use the DUAL mode. (p. 38)
	Photos are blurred when shooting at night.	As the camera tries to let in more light, the shutter speed slows. This can make it difficult to steady the camera and may result in camera shake. • Rotate the mode dial to . (p. 37) • Turn on the flash. (p. 50) • Set ISO sensitivity options. (p. 51) • Use a tripod to prevent your camera from shaking.
	Subjects come out too dark because of backlighting.	When the light source is behind the subject or when there is a high contrast between the light and dark areas, the subject may appear too dark. • Avoid shooting toward the sun. • Select **Backlight** in **SCN** mode. (p. 33) • Set the flash option to **Fill in**. (p. 50) • Adjust the exposure. (p. 59) • Set the Auto Contrast Balance (**ACB**) option. (p. 60) • Set the metering option to **Spot** if a bright subject is in the center of the frame. (p. 60)

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Capturing photos of people

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- Self-Shot ▶ 42
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- ACB (to compensate for subjects against bright backgrounds) ▶ 60
- Metering ▶ 60
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Basic functions

Learn about your camera's layout, icons, and basic functions for shooting.

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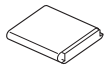
Unpacking

The following items are included in your product box.

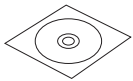
Camera

AC adapter/
USB cable



Rechargeable battery

Strap



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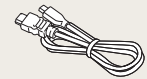
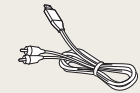
Optional accessories

Camera case

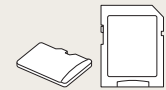


HDMI cable



A/V cable

Battery charger

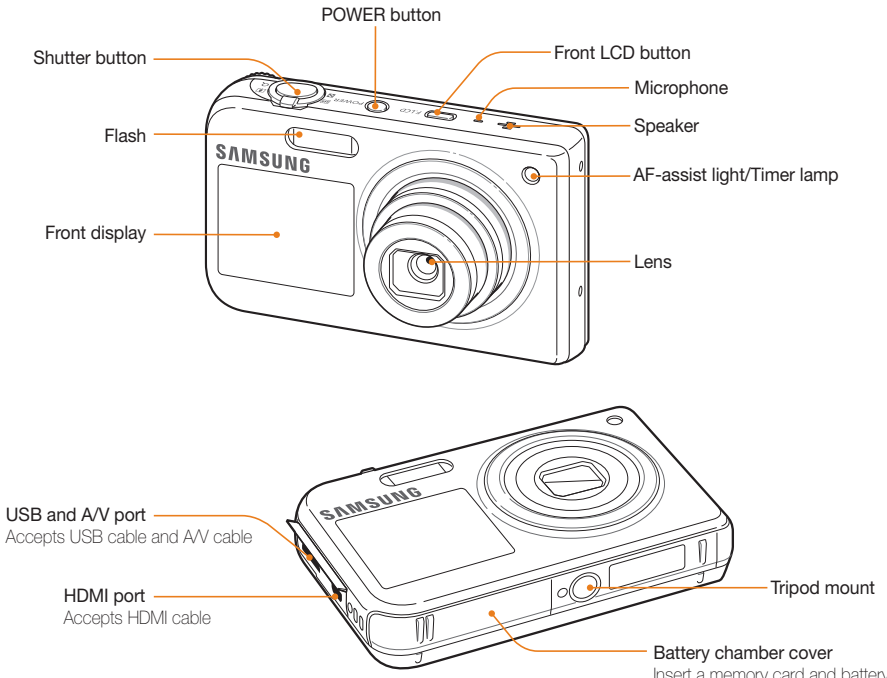


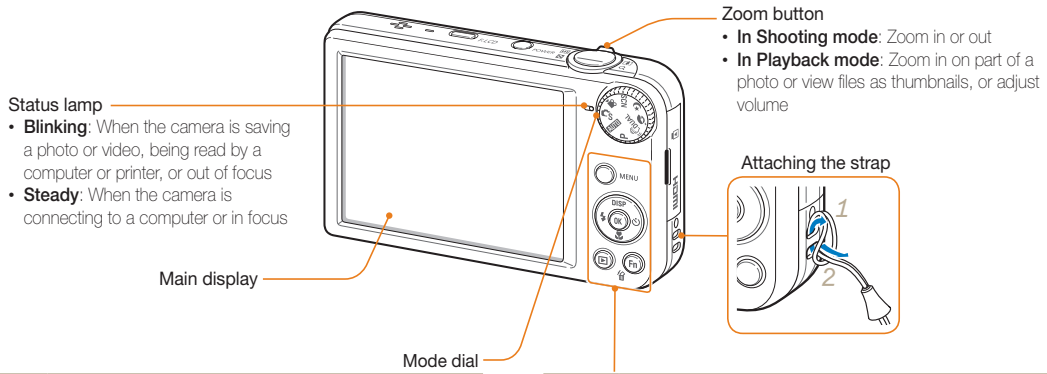
Memory card/
Memory card adapter

The illustrations may differ slightly from the items shipped with your product.

Camera layout

Before you start, familiarize yourself with your camera's parts and their functions.



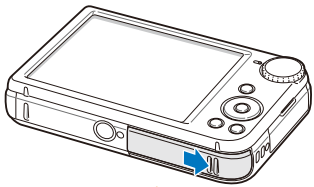


Icon	Description
	Smart Auto: Capture a photo by letting the camera automatically detect and select a scene mode.
AUTO	**Auto**: Capture a photo quickly and easily with minimal settings
P	**Program**: Capture a photo by setting options.
DUAL	**DUAL IS**: Take a photo with options suitable for reducing camera shake
	Beauty Shot: Capture a photo of a person with options to hide facial imperfections
	Night: Capture a photo with options for shooting at night
SCN	**Scene**: Capture a photo with options preset for a specific scene.
	Movie: Record a video.

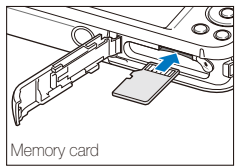
Button	Description
MENU	Access options or menus.
DISP / OK	**Basic functions** / **Other functions** DISP — Change the display option. / Move up Change the macro option. / Move down Change the flash option. / Move left Change the timer option. / Move right
OK	Confirm the highlighted option or menu.
	Enter Playback mode.
Fn	• Access options in Shooting mode. • Delete files in Playback mode.

Inserting the battery and memory card

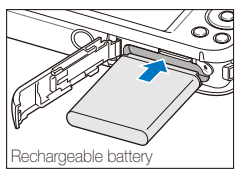
Learn how to insert the battery and an optional memory card into the camera.

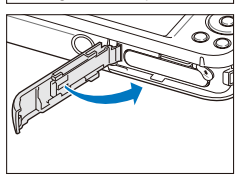


Insert a memory card with the gold-colored contacts facing up.

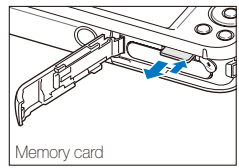


Insert the battery with the Samsung logo facing up.

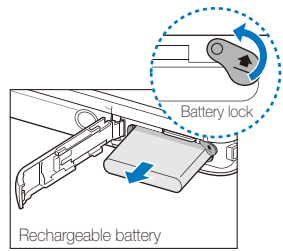




Removing the battery and memory card



Push the card gently until it disengages from the camera, and then pull it out of the slot.



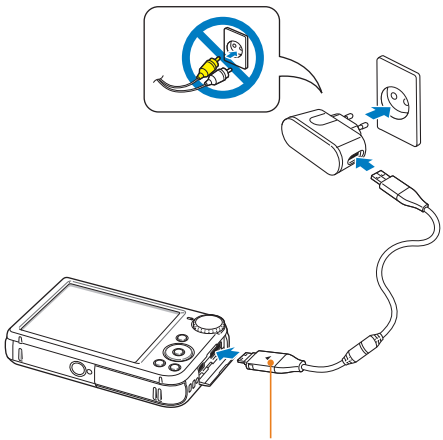
Slide the lock up to release the battery.

You can use the internal memory for temporary storage if a memory card is not inserted.

Charging the battery and turning on your camera

Charging the battery

Before you use the camera for the first time, you must charge the battery. Attach the USB cable to the AC adapter, and then plug the end of cable with the indicator light into your camera.



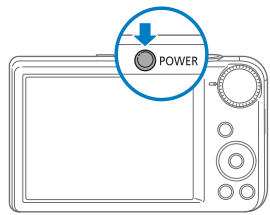
Indicator light

- **Red**: Charging
- **Orange**: Error
- **Green**: Fully charged

Turning on your camera

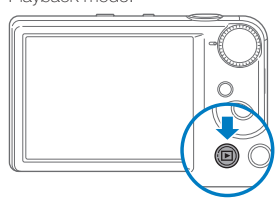
Press [**POWER**] to turn your camera on or off.

- The initial setup screen appears when you turn on the camera for the first time. (p. 18)



Turning on your camera in Playback mode

Press [▶]. The camera turns on and immediately accesses Playback mode.

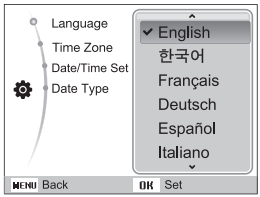


If you turn on your camera by pressing and holding [▶] for about 5 seconds, the camera does not emit any sounds.

Performing the initial setup

When the initial setup screen appears, follow the steps below to configure the camera's basic settings.

1 Press [⏲] to select **Language**, and then press [⏲] or [**OK**].

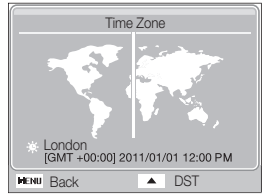


2 Press [**DISP**] or [✿] to select a language, and then press [**OK**].

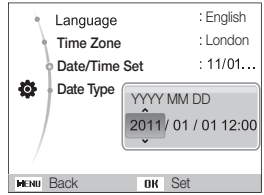
3 Press [**DISP**] or [✿] to select **Time Zone**, and then press [⏲] or [**OK**].

4 Press [ϟ] or [⏲] to select a time zone, and then press [**OK**].

- To set the daylight-saving time, press [**DISP**].



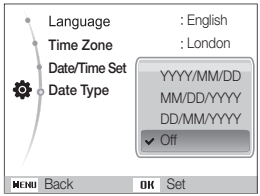
5 Press [**DISP**] or [✿] to select **Date/Time Set**, and then press [⏲] or [**OK**].



6 Press [ϟ] or [⏲] to select an item.

7 Press [**DISP**] or [] to set the date and time, and then press [**OK**].

8 Press [**DISP**] or [] to select **Date Type**, and then press [] or [**OK**].

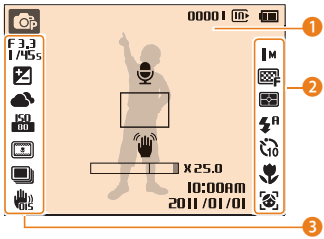


9 Press [**DISP**] or [] to set a date format, and then press [**OK**].

10 Press [**MENU**] to switch to the Shooting mode.

Learning icons

The icons the camera displays on the screen change according to the mode you select or the options you set.



1 Status icons

Icon	Description
	Shooting mode
00001	Available number of photos
00:00:20	Available recording time
	Memory card not inserted (Internal memory)
	Memory card inserted
	• : Fully charged • : Partially charged • : Empty (Recharge)
	Voice memo

Icon	Description
	Auto focus frame
	Camera shake
	Zoom indicator
x25.0	Zoom ratio
10:00 AM 2011/01/01	Current date and time
3M	Photo resolution when Intelli zoom is on

2 Option Icons (on the right)

Icon	Description
M	Photo resolution
FHD	Video resolution
	Photo quality
30	Frame rate
	Metering
A	Flash
10	Timer
	Auto focus option

Icon	Description
	Face detection
OFF	Microphone muted

3 Option Icons (on the left)

Icon	Description
F3.3 1/45s	Aperture and shutter speed
LT	Long time shutter
	Exposure value adjusted
	White balance
	Face tone
	Face retouch
ISO 80	ISO sensitivity
	Smart filter
	Image adjustment (contrast, sharpness, and saturation)
	Burst type
OIS	Optical Image Stabilization (OIS)

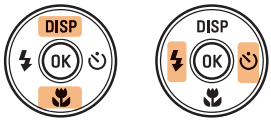
Selecting options or menus

You can select options by pressing [**MENU**], and then pressing [**DISP**], [], [], or []. Press [**OK**] to confirm.

> You can also access shooting options by pressing [**Fn**], but some options may not be available.

1 In Shooting mode, press [**MENU**].

2 Select an option or menu.
- To move up or down, press [**DISP**] or [].
- To move left or right, press [] or [].



3 Press [**OK**] to confirm the highlighted option or menu.

Going back to the previous menu

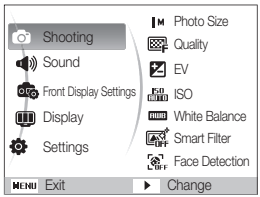
Press [**MENU**] again to go back to the previous menu.

> Half-press [**Shutter**] to return to the Shooting mode.

For example, selecting a White Balance option in Program mode

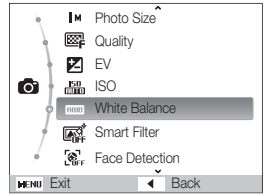
1 Rotate the mode dial to **P**.

2 Press [**MENU**].

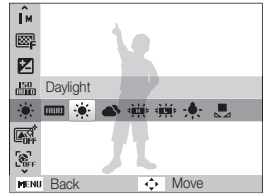


3 Press [**DISP**] or [ ] to select **Shooting**, and then press [ ] or [**OK**].

4 Press [**DISP**] or [ ] to select **White Balance**, and then press [ ] or [**OK**].



5 Press [ ] or [ ] to select a White Balance option.



6 Press [**OK**].

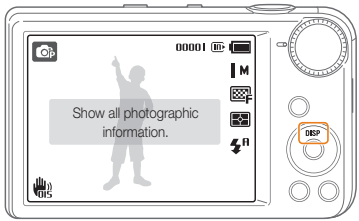
Setting the display and sound

Learn how to change the basic display information and the sound settings.

Setting the display type

You can select a display type for the Shooting or Playback mode.

Press [**DISP**] repeatedly to change the display type.



Mode	Description
Shooting	• Hide information about shooting, except for basic information, such as the available number of photos, the available recording time, and the battery icon. • Display all information about shooting.
Playback	• Hide all information about the current file. • Display information about the current file, except for the file information. • Display all information about the current file.

Setting the sound

Set the sound your camera emits when you perform functions.

1. In Shooting or Playback mode, press [**MENU**].
2. Select **Sound** → **Beep Sound**.
3. Select an option.

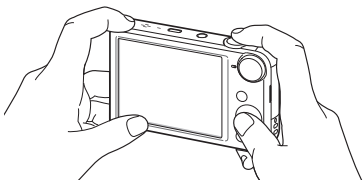
Option	Description
Off	The camera does not emit any sounds.
1/2/3	The camera emits sounds.

Capturing photos

Learn how to capture photos easily and quickly in Auto mode.

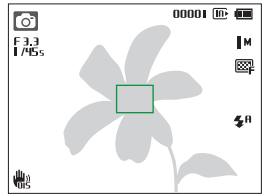
1 Rotate the mode dial to **AUTO**.

2 Align your subject in the frame.



3 Half-press [**Shutter**] to focus.

- A green frame means the subject is in focus.
- A red frame means the subject is out of focus.



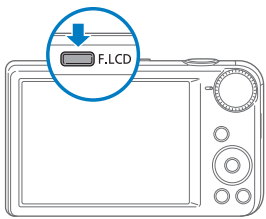
4 Press [**Shutter**] to capture a photo.

See page 29 for tips to get clearer photos.

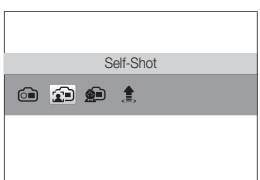
Turning on the front display

The front display helps you capture self-portraits, or photos of children, or photos of people jumping. If you use the Children mode, you can play a short animation on the front display to attract a child's attention. (p. 43)

1 In Shooting mode, press the front LCD button.



2 Select a shooting option.

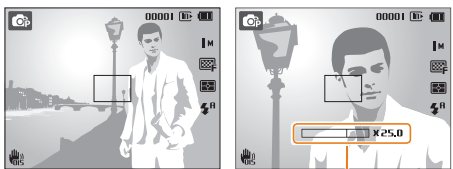


Icon	Description
	Front On: Turn on the front display.
	Self-Shot: View yourself on the front display while you capture a self-portrait. (p. 42)
	Children: Show a short animation on the front display to attract the attention of children. (p. 43)
	Jump Shot: Show a visual cue on the front display, so subjects can time their jumps for the photo. (p. 43)

- When you set timer options, the front display will remain active. (p. 49)
- When you use the camera in brightly lit or sunny areas, you may not be able to see the front display clearly.
- When you play slide shows or movies, the front display may not activate even if you press the front LCD button.
- **Self-Shot** is automatically selected if you do not select an option within 3 seconds.
- You can set the camera to automatically release the shutter when it detects a smiling face in Self Shot or Children mode. (p. 95)

Zooming

You can capture close-up photos by adjusting the zoom. Your camera has a 5X Optical zoom, 2X Intelli zoom, and 5X Digital zoom. The Intelli zoom and Digital zoom cannot be used at the same time.

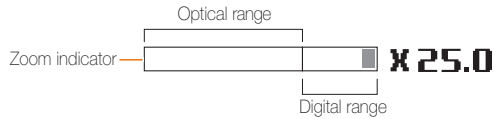


The available zoom ratio for videos differs from photo zoom ratio.

Digital zoom

AUTO P SCN

If the zoom indicator is in the digital range, your camera is using the Digital zoom. By using both the Optical zoom and Digital zoom, you can zoom in up to 25 times.

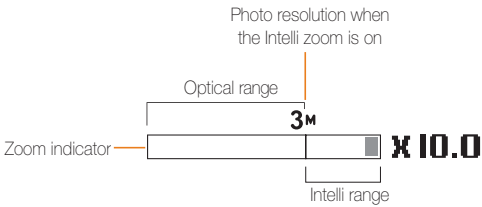


- The Digital zoom is not available with the Smart Filter effect or Tracking AF option.
- If you capture a photo with the Digital zoom, the photo quality may deteriorate.

Intelli zoom

S AUTO P SCN

If the zoom indicator is in the Intelli range, your camera is using the Intelli zoom. Photo resolution varies according to the zoom rate if you use the Intelli zoom. By using both the Optical zoom and Intelli zoom, you can zoom in up to 10 times.



- The Intelli zoom is not available with the Smart Filter effect or Tracking AF option.
- The Intelli zoom is available only when you set a 4:3 resolution ratio. If you set another resolution ratio with Intelli zoom on, the Intelli zoom will be turned off automatically.
- The Intelli zoom helps you capture a photo with less quality deterioration than the Digital zoom. However, the photo quality may be lower than when you use the Optical zoom.

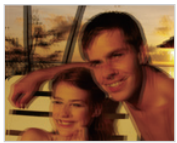
Setting Intelli zoom

1. In Shooting mode, press [**MENU**].
2. Select **Shooting** → **Intelli Zoom**.
3. Select an option.

Icon	Description
	Off: The Intelli zoom is deactivated.
	On: The Intelli zoom is activated.

Reducing camera shake (OIS) AUTO P SCN

Reduce camera shake optically in Shooting mode.



Before correction

After correction

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** or **Movie** → **OIS**.

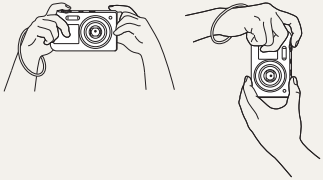
3 Select an option.

Icon	Description
OFF	**Off**: OIS is deactivated.
OIS	**On**: OIS is activated.

- OIS may not function properly when:
  - you move your camera to follow a moving subject
  - you use the Digital zoom
  - there is too much camera shake
  - the shutter speed is slow (for example, when you capture night scenes)
  - the battery is low
  - you capture a close-up shot
- If you use the OIS function with a tripod, your images may be blurred by the vibration of the OIS sensor. Deactivate the OIS function when you use a tripod.
- If the camera is hit or dropped, the display will be blurry. If this occurs, turn off the camera, and then turn it on again.

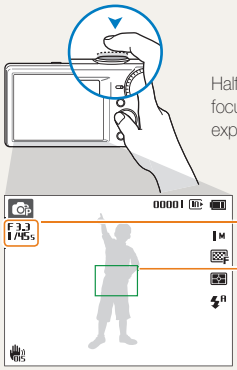
Tips for getting a clearer photo

Holding your camera correctly



Ensure nothing is blocking the lens.

Half-pressing the shutter button



Half-press [**Shutter**] and adjust the focus. The camera adjusts the focus and exposure automatically.

The camera sets the aperture value and shutter speed automatically.

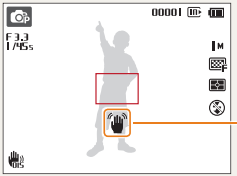
Focus frame

- Press [**Shutter**] to capture the photo if the focus frame appears in green.
- Change the composition and half-press [**Shutter**] again if the focus frame appears in red.

Reducing camera shake

- Set the Optical Image Stabilization option to reduce camera shake. (p. 28)
- Select the DUAL mode to reduce camera shake both optically and digitally. (p. 38)

When is displayed



Camera shake

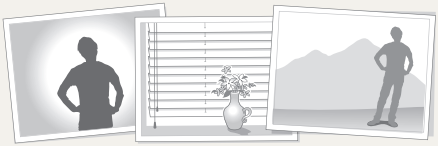
When you shoot in the dark, avoid setting the flash option to **Slow Sync** or **Off**. The aperture remains open longer and it may be harder to hold the camera still.

- Use a tripod or set the flash option to **Fill in**. (p. 50)
- Set ISO sensitivity options. (p. 51)

Preventing your subject from being out of focus

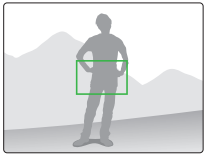
It may be difficult to get your subject in focus when:

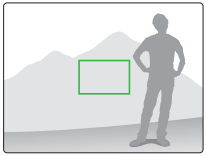
- there is little contrast between the subject and background (for example, when your subject is wearing clothing that is similar in color to the background)
- the light source behind the subject is too bright
- the subject is shiny or reflective
- the subject includes horizontal patterns, such as blinds
- the subject is not positioned in the center of the frame



Use the focus lock

Half-press [**Shutter**] to focus. When the subject is in focus, you can reposition the frame to change the composition. When you are ready, press [**Shutter**] to capture your photo.





- When you capture photos in low light

Turn on the flash. (p. 50)

- When subjects are moving rapidly

Use the Continuous or Motion Capture function. (p. 63)

Extended functions

Learn how to capture a photo, record a video, and voice memo by selecting a mode.

Shooting modes 32
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- Using the Scene mode 33
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- Recording a voice memo 45
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Shooting modes

Capture photos or record videos by selecting the best shooting mode for the conditions.

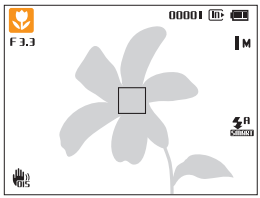
Using the Smart Auto mode

In Smart Auto mode, your camera automatically chooses the appropriate camera settings based on the type of scene it detects. The Smart Auto mode is helpful if you are not familiar with the camera settings for various scenes.

1 Rotate the mode dial to .

2 Align your subject in the frame.

- The camera automatically selects a scene. An appropriate scene icon will appear at the top left of the screen. The icons are listed below.



Icon	Description
	Landscapes
	Scenes with bright white backgrounds
	Landscapes at night (when the flash is off)

Icon	Description
	Portraits at night
	Landscapes with backlighting
	Portraits with backlighting
	Portraits
	Close-up photos of objects
	Close-up photos of text
	Sunsets
	Clear skies
	Forested areas
	Close-up photos of colorful subjects
	Camera is stabilized or on a tripod (when shooting in the dark)
	Actively moving subjects
	Fireworks (when using a tripod)

3 Half-press [**Shutter**] to focus.
- In several scenes, the camera automatically captures a photo when you half-press [**Shutter**].

4 Press [**Shutter**] to capture the photo.

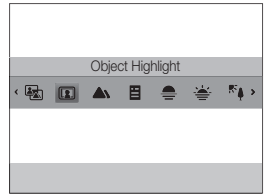
- If the camera does not recognize an appropriate scene mode, it uses the default settings for the mode.
- Even if it detects a face, the camera may not select a portrait mode depending on the subject's position or lighting.
- The camera may not select the correct scene depending on the shooting conditions, such as camera shake, lighting, or distance to the subject.
- Even if you use a tripod, the camera may not detect the mode if the subject is moving.
- In mode, the camera consumes more battery power, because it changes settings often to select appropriate scenes.

Using the Scene mode

In Scene mode, you can capture a photo with options that are preset for a specific scene.

1 Rotate the mode dial to **SCN**.

2 Select a scene.



- To change a scene mode, press [**MENU**], and then select **Scene**. You can select any scene you want.
- For the Magic Frame mode, see "Using the Magic Frame mode" on page 34.
- For the Object Highlight mode, see "Using the Object Highlight mode" on page 34.

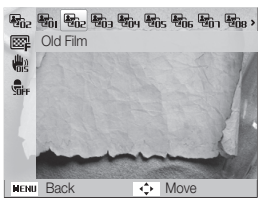
3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

Using the Magic Frame mode

In Magic Frame mode, you can apply various frame effects to your photos. The shape and the feel of the photos will change according to the frame you select.

1 Rotate the mode dial to **SCN**.
2 Select **Magic Frame**.
3 Press [**MENU**].
4 Select **Shooting** → **Frame**.
5 Select an option.



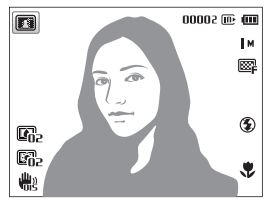
6 Align your subject in the frame, and then half-press [**Shutter**] to focus.
7 Press [**Shutter**] to capture the photo.

In Magic Frame mode, the resolution is automatically set to 2M.

Using the Object Highlight mode

The Object Highlight mode makes the subject more discernible by adjusting the depth of field.

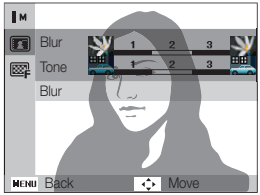
1 Rotate the mode dial to **SCN**.
2 Select **Object Highlight**.
3 Position the camera according to the optimum distance displayed on the screen.
   - The optimum distance will vary, based on the zoom ratio you use.



4 Press [**MENU**].
5 Select **Shooting** → **Object Highlight Effect**.

6 Select an option to adjust **Blur** or **Tone**.

- **Blur**: The higher the value, the more intense the blur effect in the photo.
- **Tone**: The higher the value, the brighter the photo.



7 Press [**OK**] to save.

8 Half-press [**Shutter**] to focus.

- When the camera can apply the object highlight effect, will appear.
- When the camera cannot apply the object highlight effect, will appear. If this occurs, adjust the distance from the camera to the subject.

9 Press [**Shutter**] to capture a photo.

- Available resolutions in Object Highlight mode are 3M and M.
- If the shooting distance is not within the optimum range, you can capture a photo but the Object Highlight effect will not be applied.
- The Object Highlight effect cannot be used in dark places.
- The Object Highlight effect cannot be used with the Optical zoom at 3X or higher.
- Digital zoom is not available in Object Highlight mode.
- Use a tripod to prevent camera shake as the camera captures 2 consecutive photos to apply the effect.
- The subject and the background should have a significant contrast in color.
- Subjects should be positioned far away from the background for the greatest effect.

Using the Beauty Shot mode

In Beauty Shot mode, you can capture a portrait with options to hide facial imperfections.

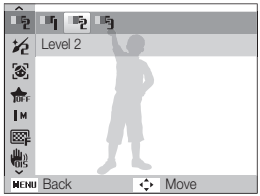
1 Rotate the mode dial to .

2 Press [**MENU**].

3 Select **Shooting** → **Face Tone**.

4 Select an option.

- For example, increase the face tone setting to make skin appear lighter.

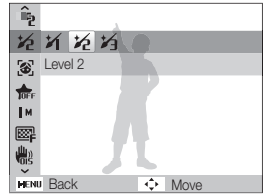


5 Press [**MENU**].

6 Select **Shooting** → **Face Retouch**.

7 Select an option.

- For example, increase the Face Retouch setting to hide more imperfections.



8 Align your subject in the frame, and then half-press [**Shutter**] to focus.

9 Press [**Shutter**] to capture the photo.

When using the Beauty Shot mode, the focus distance will be set to Auto Macro.

Using the Night mode

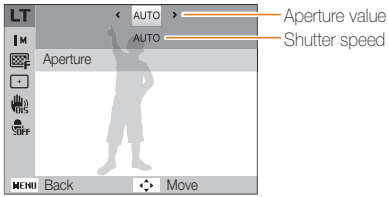
In Night mode, you can use a slow shutter speed to extend the time until the shutter closes. Increase the aperture value to prevent overexposure.

1 Rotate the mode dial to .

2 Press [**MENU**].

3 Select **Shooting** → **Long Time Shutter**.

4 Select the aperture value or shutter speed.



5 Select an option.

- If you select **AUTO**, the aperture value or shutter speed will be adjusted automatically.

6 Align your subject in the frame, and then half-press [**Shutter**] to focus.

7 Press [**Shutter**] to capture the photo.

Use a tripod to prevent blurry photos.

Using the DUAL IS mode

Reduce camera shake and prevent blurred photos with Optical and Digital Image Stabilization functions.

Before correction

After correction

1 Rotate the mode dial to DUAL.

2 Align your subject in the frame, and then half-press [**Shutter**] to focus.

3 Press [**Shutter**] to take the photo.

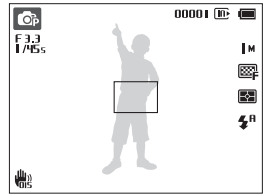
- The Digital zoom and Intelli-zoom are not available in DUAL mode.
- The camera will optically correct photos only when the light source is brighter than fluorescent light.
- If your subject is moving rapidly, the photo may be blurry.
- Set the Optical Image Stabilization option to reduce camera shake in different shooting modes. (p. 28)

Using the Program mode

In Program mode, you can set most options, except the shutter speed and aperture value, which the camera sets automatically.

1 Rotate the mode dial to **P**.

2 Set desired options.
(For a list of options, refer to page 46.)



3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

Using the Movie mode

In Movie mode, you can record high-definition videos of up to 20 minutes in length. The camera saves recorded videos as MP4 (H.264) files.

- H.264 (MPEG-4 part10/AVC) is a high-compression video format established by the international standard organizations ISO-IEC and ITU-T.
- Some memory cards may not support high definition recording. In this case, set a lower resolution.
- Memory cards with slow writing speeds will not support high-resolution videos and high-speed videos. To record high-resolution or high-speed videos, use memory cards with faster writing speeds.

1 Rotate the mode dial to 🎬.

2 Press [**MENU**].

3 Select **Movie** → **Frame Rate**.

4 Select a frame rate (the number of frames per second).
- As the frame rate increases, action appears more natural, but the file size also increases.

Depending on the resolution and frame rate, the movie may appear smaller than the original size shown on the main display.

5 Press [**MENU**].

6 Select **Movie** → **Sound Alive**.

7 Select an option.

Icon	Description
	Sound Alive On: Turn on the Sound Alive function.
OFF	**Sound Alive Off**: Turn off the Sound Alive function.
	Mute: Do not record sounds.

- Do not block the microphone when you use the Sound Alive function.
- Recordings made with Sound Alive may differ from actual sounds.

8 Set desired options. (For a list of options, refer to page 46.)

9 Press [**Shutter**] to start recording.

10 Press [**Shutter**] again to stop recording.

Pause recording

The camera allows you to temporarily pause a video while recording. With this function, you can record separate scenes as a single video.

- Press [**OK**] to pause while recording.
- Press [**OK**] to resume.

Using the Smart Scene Detection mode

In Smart Scene Detection mode, your camera automatically chooses the appropriate camera settings based on the scene it has detected.

1. Rotate the mode dial to 🎬.
2. In Shooting mode, press [**MENU**].
3. Select **Movie** → **Smart Scene Detection** → **On**.
4. Align your subject in the frame.
   - The camera automatically selects a scene. An appropriate scene icon will appear at the top left of the screen. The icons are listed below.

Icon	Description
	Landscapes
	Sunsets
	Clear skies
	Forested areas

5 Press [**Shutter**] to start recording.

6 Press [**Shutter**] again to stop recording.

- If the camera does not recognize an appropriate scene mode, it uses the default settings for the Smart Scene Detection mode.
- The camera may not select the correct scene depending on the shooting conditions, such as camera shake, lighting, and distance to the subject.
- In Smart Scene Detection mode, you cannot set smart filter effects.

Capturing photos with the front display

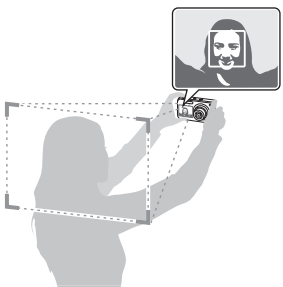
The front display helps you capture self-portraits or photos of children. You can also use the Jump Shot Timer with the front display.

Using the Self-portrait mode

AUTO P SCN

Conveniently capture photos of yourself with the front display.

1. In Shooting mode, press the front LCD button.
2. Select **Self-Shot**.
   - Your camera will automatically detect your face and display a frame to indicate the detected face.



3. Half-press [**Shutter**] to focus.
4. Press [**Shutter**] to capture the photo.

Capturing an Easy Self Shot

If you press the front LCD button when the power is off, the front display turns on for an Easy Self Shot. Because the main display is off, the camera consumes less battery power and you can prevent others from viewing the main display.

- The camera will turn off when you press the front LCD button again or press [**POWER**].
- The front display will turn off and the main display will turn on when you press [**OK**].

Using the Children mode

The Children mode attracts children by showing a short animation on the front display.

1. In Shooting mode, press the front LCD button.
2. Select **Children**.
   - The camera will display an animation.
3. Half-press [**Shutter**] to focus.
4. Press [**Shutter**] to capture the photo.

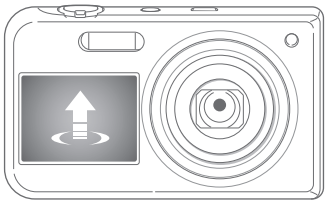
- You can download animations from the Samsung website or transfer them from Intelli-studio. (p. 88) Visit www.samsung.com for more information.
- You can use Intelli-studio to edit videos you have captured and then play them on the front display. (p. 88)
- You can add sounds to animations to draw children's attention. (p. 95)

Using the Jump Shot Timer

Capture a photo of people jumping. An icon will appear on the front display to tell your subjects when to jump.

1. In Shooting mode, press the front LCD button.
2. Select **Jump Shot**.
3. Press [**Shutter**].
   - The front display will start a countdown a few seconds before shooting.

4 Jump when the jump icon appears on the front display.
- The camera will capture 3 photos in succession.



If you are capturing photos using the jump shot timer in low light conditions or indoors, photos may appear dark.

Recording a video with the front display

Recording a video in Self-portrait mode

1 In Shooting mode, press the front LCD button.
2 Select **Front On**.
3 Press [**Shutter**] to start recording.
4 Press [**Shutter**] again to stop recording.

Recording a video in Children mode

1 In Shooting mode, press the front LCD button.
2 Select **Children**.
3 Press [**Shutter**] to start recording.
4 Press [**Shutter**] again to stop recording.

Recording voice memos

AUTO P DUAL SCN

Learn how to record a voice memo that you can play back later. You can also add a voice memo to a photo to remind you of shooting conditions.

You will get the best sound quality when you speak 16 in (40 cm) away from the camera.

Recording a voice memo

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Voice** → **Record**.

3 Press [**Shutter**].
- Press [**OK**] to pause or press [**OK**] to resume.
- Each memo can be up to 10 hours long if memory is available.

4 Press [**Shutter**] again to stop recording.
- Press [**Shutter**] again to record a new voice memo.

5 Press [**MENU**] to return to the Shooting mode.

Adding a voice memo to a photo

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Voice** → **Memo**.

3 Align your subject in the frame, and then capture a photo.
- The camera begins to record a voice memo right after you capture the photo.

4 Record a short voice memo (10 seconds maximum).
- Press [**Shutter**] to stop recording a voice memo before the 10 seconds are up.

You cannot add voice memos to photos in the burst mode.

Shooting options

Learn how to set the options in Shooting mode.

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Selecting a resolution and quality

Learn how to change the image resolution and quality settings.

Selecting a resolution

As you increase the resolution, your photo or video will include more pixels, so it can be printed on larger paper or displayed on a larger screen. When you use a high resolution, the file size will also increase.

Setting a photo resolution

S AUTO P DUAL SCN

1. In Shooting mode, press [MENU].
2. Select **Shooting** → **Photo Size**.
3. Select an option.

Icon	Description
16M	**4608 X 3456**: Print on A1 paper.
14M	**4608 X 3072**: Print on A1 paper in wide ratio (3:2).
12M	**4608 X 2592**: Print on A2 paper in panorama ratio (16:9) or play back on an HDTV.
10M	**3648 X 2736**: Print on A3 paper.
5M	**2592 X 1944**: Print on A4 paper.
3M	**1984 X 1488**: Print on A5 paper.
2M	**1920 X 1080**: Print on A5 paper in panorama ratio (16:9) or play back on an HDTV.
1M	**1024 X 768**: Attach to an email.

Setting a video resolution

1. In Shooting mode, press [MENU].
2. Select **Movie** → **Movie Size**.
3. Select an option.

Icon	Description
1280 HQ	**1280 X 720 HQ**: Play back high-quality files on an HDTV.
1280	**1280 X 720**: Play back on an HDTV.
640	**640 X 480**: Play back on an analog TV.
320	**320 X 240**: Post on a web page.

Selecting a photo quality AUTO P DUAL SCN

The camera compresses and saves the photos you capture in the JPEG format. Higher image quality settings will result in larger file sizes.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Quality**.

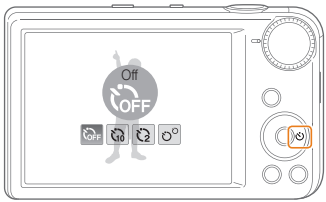
3 Select an option.

Icon	Description
SF	**Super Fine**: Capture photos in super high quality.
F	**Fine**: Capture photos in high quality.
N	**Normal**: Capture photos in normal quality.

Using the timer

Learn how to set the timer to delay shooting.

1 In Shooting mode, press [⏲].



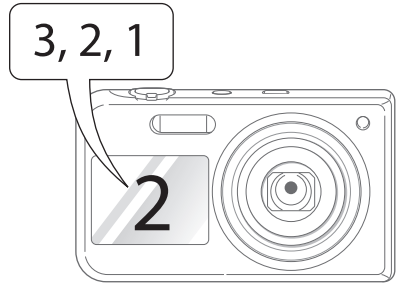
2 Select an option.

Icon	Description
	Off: The timer is not active.
	10 Sec: Capture a photo after a 10-second delay.
	2 Sec: Capture a photo after a 2-second delay.
	Double: Capture one photo after a 10-second delay and another photo after a 2-second delay.

Available options may differ depending on the shooting conditions.

3 Press [**Shutter**] to start the timer.

- The AF-assist light/timer lamp blinks. The camera will automatically capture a photo at the specified time.
- The front display will start a countdown a few seconds before shooting.



- Press [**Shutter**] or [⏲] to cancel the timer.
- Depending on the Face Detection option you have selected, the timer function or some of its options may not be available.
- Self timer options are not available if you set burst options.

Shooting in the dark

Learn how to capture photos at night or in low light conditions.

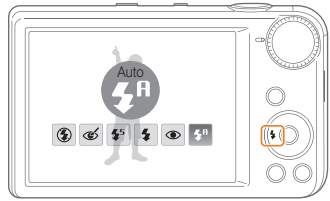
Preventing red-eye

If the flash fires when you capture a photo of a person in the dark, a red glow may appear in the person's eyes. To prevent this, select **Red-eye** or **Red-eye Fix**. Refer to flash options in "Using the flash."

Using the flash

Use the flash when you capture photos in the dark or when you need more light on your photos.

1 In Shooting mode, press [⚡].



2 Select an option.

Icon	Description
	Off: • The flash will not fire. • The camera will display the shake warning when you are shooting in low light.
	Red-eye Fix: • The flash fires when the subject or background is dark, and the camera corrects red-eyes through its advanced software analysis. • There is an interval between 2 bursts of the flash. Do not move until the flash fires a second time.

Icon	Description
	Slow Sync: • The flash fires and the shutter stays open longer. • This option is recommended when you want to capture ambient light to reveal more details in the background. • Use a tripod to prevent your photos from blurring. • The camera will display the shake warning when you are shooting in low light.
	Fill in: • The flash always fires. • The camera automatically adjusts light intensity.
	Red-eye: • The flash will fire twice when the subject or background is dark to reduce the red-eye effect. • There is an interval between 2 bursts of the flash. Do not move until the flash fires a second time.
	Auto: The flash will fire automatically when the subject or background is dark.
	Auto: The camera will select a proper flash setting for the scene it detects in Smart Auto mode.

Available options may differ depending on the shooting conditions.

- Flash options are not available if you set burst options or select **Blink Detection**.
- Make sure that your subjects are within the recommended distance from the flash. (p. 114)
- If light from the flash is reflected or there is a substantial amount of dust in the air, tiny spots may appear in your photo.

Adjusting the ISO sensitivity P

The ISO sensitivity is the measure of a film's sensitivity to light as defined by the International Organization for Standardization (ISO). The higher ISO sensitivity you select, the more sensitive to light your camera becomes. With a higher ISO sensitivity, you can get a better photo without using the flash.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **ISO**.

3 Select an option.

- Select ISO AUTO to use an appropriate ISO sensitivity based on the brightness of the subject and lighting.

Higher ISO sensitivities may result in more image noise.

Changing the camera's focus

Learn how to adjust the camera's focus to suit the subject and the shooting conditions.

Using macro

AUTO P DUAL

Use macro to capture close-up photos of subjects, such as flowers or insects.

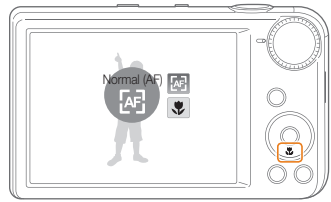
- Try to hold the camera firmly to prevent blurry photos.
- Turn off the flash if the distance to the subject is less than 16 in (40 cm).

Using auto focus

AUTO P DUAL

To capture sharp photos, select the appropriate focus according to your distance from the subject.

1 In Shooting mode, press [].



2 Select an option.

Icon	Description
AF	**Normal (AF)**: Focus on a subject farther than 32 in (80 cm).
	Macro: Manually focus on a subject that is 2-32 in (5-80 cm) from the camera (39-59 in [100-150 cm] when you use the zoom).

Using tracking auto focus

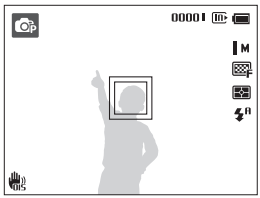
AUTO P DUAL SCN

Tracking AF allows you to track and auto focus on your subject, even when you are moving.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Focus Area** → **Tracking AF**.

3 Focus on the subject you want to track and press [**OK**].



- The white frame means that your camera is tracking the subject.
- The green frame means that your subject is in focus when you half-press [**Shutter**].

- If you do not select a focus area, the focus frame will appear in the center of the screen.
- Tracking a subject may fail when:
  - the subject is too small
  - the subject moves excessively
  - the subject is backlit or you are shooting in a dark place
  - colors or patterns on the subject and the background are the same
  - the camera shakes excessively
- When tracking a subject fails, the focus frame will appear as a white single-line frame (▭).
- If the camera fails to track the subject, you must reselect the subject to track.
- If the camera fails to focus, the focus frame will change to a red single-line frame (▭).
- If you use this function, you cannot set the timer options, Face Detection options, and Smart Filter effects.

Adjusting the focus area AUTO P DUAL SCN

You can get clearer photos by selecting an appropriate focus area according to your subject's location in the scene.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Focus Area**.

3 Select an option.

Icon	Description
	Center AF: Focus on the center of the frame (suitable when subjects are located at or near the center).
	Multi AF: Focus on one or more of 9 possible areas.
	Tracking AF: Focus on and track the subject. (p. 53)

Using Face Detection

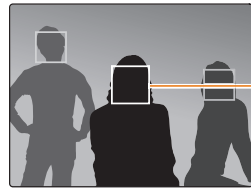
If you use Face Detection options, your camera can automatically detect a human face. When you focus on a human face, the camera adjusts the exposure automatically. Use **Blink Detection** to detect closed eyes or **Smile Shot** to capture a smiling face. You can also use **Smart Face Recognition** to register faces and prioritize the focus on them.

- The camera automatically tracks the registered face.
- Face Detection may not be effective when:
  - the subject is far from the camera (The focus frame will appear orange for the Smile Shot and Blink Detection.)
  - it is too bright or too dark
  - the subject is not facing the camera
  - the subject is wearing sunglasses or a mask
  - the subject's facial expression changes drastically
  - the subject is backlit or the lighting conditions are unstable
- Face Detection is not available when you set Smart Filter effects, Image Adjustment options, or Tracking AF.
- Depending on shooting options, available Face Detection options may differ.
- Depending on Face Detection options you selected, the timer function may not be available or available timer options may differ.
- Depending on Face Detection options you selected, some burst options are not available.
- When you capture photos of detected faces, they will be registered in the face list.
- You can view registered faces in order of priority in Playback mode. (p. 70) Even though faces are registered successfully, they may not be classified in Playback mode.
- A face detected in Shooting mode may not appear in the face list or Smart Album.

Detecting faces

Your camera automatically detects up to 10 human faces in one scene.

1. In Shooting mode, press [**MENU**].
2. Select **Shooting** → **Face Detection** → **Normal**.



The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.

- The closer you are to the subjects, the quicker your camera will detect faces.
- The detected faces may not be registered if you set burst options such as **Continuous**, **Motion Capture**, or **AEB**.

Capturing a smile shot

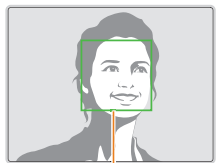
The camera automatically releases the shutter when it detects a smiling face.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Face Detection** → **Smile Shot**.

3 Compose your shot.

- The camera automatically releases the shutter when it detects a smiling face.



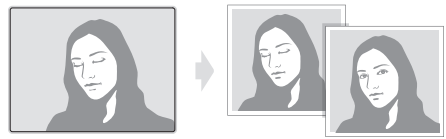
When your subject smiles broadly, your camera can detect the smile more easily.

Detecting eye blinking

If your camera detects closed eyes, it will automatically capture 2 photos in succession.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Face Detection** → **Blink Detection**.



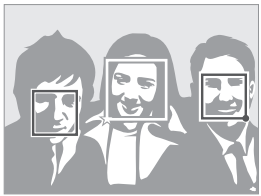
- Hold your camera still while "**Capturing**" is displayed on the screen.
- If Blink Detection fails, the "**Picture taken with eyes closed.**" message appears. Capture another photo.

Using Smart Face Recognition

The camera automatically registers faces that you frequently photograph. The Smart Face Recognition feature will automatically prioritize the focus on those faces and on favorite faces. The Smart Face Recognition feature is available only when you use a memory card.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Face Detection** → **Smart Face Recognition**.



The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.

- : Faces that you have registered as favorites. (To register faces as favorites, refer to page 58.)
- : Faces that the camera automatically registers.

- The camera may recognize and register faces incorrectly depending on lighting conditions, drastic changes in the subject's pose or face, and whether or not the subject is wearing glasses.
- The camera can automatically register up to 12 faces. If the camera recognizes a new face when 12 faces have already been registered, it will replace the lowest priority face with the new one.
- The camera can detect up to 5 favorite faces in one scene.

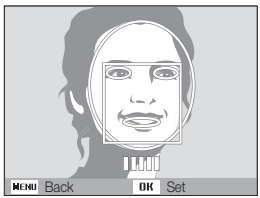
Registering faces as your favorites (My Star)

You can register your favorite faces to prioritize the focus and exposure on those faces. This feature is available only when you use a memory card.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Smart FR Edit** → **My Star**.

3 Align your subject's face with the oval guideline, and then press [**Shutter**] to register the face.



- If the subject's face is not aligned with the oval guideline, the white frame will not appear.
- Capture photos of one person at a time when registering faces.
- Capture 5 photos the subject's face for best results: one each from the front, left, right, above, and below.
- When capturing photos from the left, right, above, and below, instruct the subject not to turn his or her face more than 30 degrees.
- You can register a face even if you capture one photo of the subject's face.

4 When you are finished capturing the photos, the face list appears.

- Your favorite faces are indicated with a ★ on the face list.

- You can register up to 8 favorite faces.
- The flash will not fire when you register a favorite face.
- If you register the same face twice, you can delete one of the faces in the face list.

Viewing your favorite faces

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Smart FR Edit** → **Face List**.

- To change the ranking of your favorite faces, press [**Fn**], and then select **Edit Ranking**. (p. 70)
- To delete a favorite face, press [**Fn**], and then select **Delete**. (p. 71)

Adjusting brightness and color

Learn how to adjust the brightness and color for better image quality.

Adjusting the exposure manually (EV) P DUAL

Depending on the intensity of the ambient light, your photos may be too bright or dark. In these cases, you can adjust the exposure to get a better photo.

Darker (-)

Neutral (0)

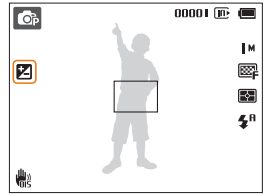
Brighter (+)

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** or **Movie** → **EV**.

3 Select a value to adjust the exposure.

- The photo will be brighter as exposure increases.
- When you adjust the exposure value, the icon will appear as shown below.



- Once you adjust the exposure, the setting will be stored automatically. You may need to change the exposure value later to avoid overexposure or underexposure.
- If you cannot decide on an appropriate exposure, select **AEB** (Auto Exposure Bracket). The camera will capture 3 consecutive photos, each with a different exposure: normal, underexposed, and overexposed. (p. 63)

Compensating for backlighting (ACB) P

When the light source is behind your subject or there is high contrast between your subject and the background, your subject is likely to appear dark in the photo. In this case, set the Auto Contrast Balance (ACB) option.

Without ACB

With ACB

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **ACB**.

3 Select an option.

Icon	Description
	Off: ACB is off.
	On: ACB is on.

The ACB feature is not available when you set **Continuous**, **Motion Capture**, or **AEB** options.

Changing the metering option P DUAL

The metering mode refers to the way in which a camera measures the quantity of light. The brightness and lighting of your photos will vary depending on the metering mode you select.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** or **Movie** → **Metering**.

3 Select an option.

Icon	Description
	Multi: • Your camera divides the frame into several areas, and then measures the light intensity of each area. • Suitable for general photos.
	Spot: • Your camera measures only the light intensity of the very center of the frame. • If a subject is not in the center of the frame, your photo may be improperly exposed. • Suitable for a subject with backlighting.
	Center-weighted: • Your camera averages the meter reading of the entire frame with emphasis placed on the center. • Suitable for photos with subjects in the center of the frame.

Selecting a light source (White balance)

P DUAL

The color of your photo depends on the type and quality of the light source. If you want the color of your photo to be realistic, select a White Balance setting that is appropriate for the lighting conditions, such as Auto WB, Daylight, Cloudy, or Tungsten.

AWB Auto WB

Daylight

Cloudy

Tungsten

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** or **Movie** → **White Balance**.

3 Select an option.

Icon	Description
AWB	**Auto WB**: Automatically set the White Balance based on the lighting conditions.
	Daylight: For outdoor photos on a sunny day.
	Cloudy: For outdoor photos on a cloudy day or in shadows.
	Fluorescent_H: For shooting under a daylight fluorescent or 3-way fluorescent light.
	Fluorescent_L: For shooting under white fluorescent light.
	Tungsten: For shooting indoor photos under incandescent bulbs or halogen lamps.
	Measure: Shutter (**Custom Set**): Use White Balance settings that you defined. (p. 62)

Defining your own White Balance

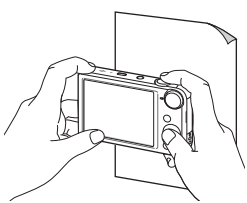
You can customize the White Balance by capturing a photo of a white surface, such as a piece of paper, under the lighting conditions in which you intend to capture a photo. The White Balance feature will help you to match the colors in your photo with the actual scene.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** or **Movie** → **White Balance**.

3 Select **Measure: Shutter**.

4 Aim the lens at a piece of white paper, and then press [**Shutter**].



Using burst modes P

It can be difficult to capture photos of fast-moving subjects or capture natural facial expressions and gestures of your subjects in photos. In these cases, select one of the burst modes to rapidly capture multiple photos.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Drive**.

3 Select an option.

Icon	Description
	Single: Capture a single photo.
	Continuous: • While you are pressing [**Shutter**], the camera continuously captures photos. • The maximum number of photos depends on the capacity of your memory card.
	Motion Capture: While you are pressing [**Shutter**], the camera captures VGA photos (6 photos per second; maximum of 30 photos).
	AEB: • Capture 3 consecutive photos, each with a different exposure: normal, underexposed, and overexposed. • Use a tripod to prevent blurry photos.

- You can use the flash, timer, ACB, and Smart Filter options only when you select **Single**.
- When you select **Motion Capture**, your camera will set the resolution to VGA and set the ISO sensitivity to **Auto**.
- Depending on the Face Detection option you selected, some burst options may not be available.

Applying effects/Adjusting images

Applying Smart Filter effects

AUTO P DUAL

Apply various filter effects to your photos and videos to create unique images.

Miniature

Vignetting

Fish-eye

Sketch

1. In Shooting mode, press [**MENU**].
2. Select **Shooting** or **Movie** → **Smart Filter**.
3. Select an effect.

Available filters in Auto, Program, and DUAL IS modes

Icon	Description
	Normal: No effect
	Miniature: Apply a tilt-shift effect to make the subject appear in miniature.
	Vignetting: Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
	Soft Focus: Hide facial imperfections or apply dreamy effects.
	Old Film 1: Apply a vintage film effect 1.
	Old Film 2: Apply a vintage film effect 2.
	Half Tone Dot: Apply a halftone effect.
	Sketch: Apply a pen sketch effect.
	Fish-eye: Blacken the edges of the frame and distort objects to imitate the visual effect of a fisheye lens.
	Defog: Make image clearer.
	Classic: Apply a black and white effect.

Icon	Description
	Retro: Apply a sepia tone effect.
	Negative: Apply a negative film effect.
	Custom RGB: Customize a color value.

When you select **Sketch**, the resolution will change to 5M and below.

Available filters in Movie mode

Icon	Description
	Normal: No effect
	Palette Effect 1: Create a vivid look with sharp contrast and strong color.
	Palette Effect 2: Make scenes clean and clear.
	Palette Effect 3: Apply a soft brown tone.
	Palette Effect 4: Create a cold and monotone effect.
	Miniature: Apply a tilt-shift effect to make the subject appear in miniature.
	Vignetting: Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
	Half Tone Dot: Apply a halftone effect.

Icon	Description
	Sketch: Apply a pen sketch effect.
	Fish-eye: Distort close objects to imitate the visual effect of a fisheye lens.
	Defog: Make image clearer.
	Classic: Apply a black and white effect.
	Retro: Apply a sepia tone effect.
	Negative: Apply a negative film effect.
	Custom RGB: Customize a color value.

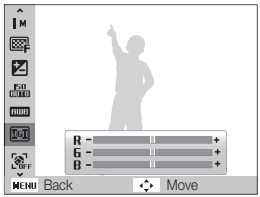
Defining your own RGB tone

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** or **Movie** → **Smart Filter**.

3 Select **Custom RGB**.

4 Select a color (R: Red, G: Green, B: Blue).



5 Select an option.

6 Press [**OK**] to save.

- If you select **Miniature** when you are recording a video, the speed of the video will increase.
- If you select **Miniature** when you are recording a video, the camera will not record sound.
- If you select a Miniature, Vignetting, Half Tone Dot, Sketch, Fish-eye, or Defog, the recording speed will be set to 15 fps and the recording resolution will be set to less than 640.
- If you set Smart Filter effects, you cannot use the Face Recognition options, ACB, burst options, Image Adjustment options, Intelli zoom, or Tracking AF.
- If you select **Sketch** when you capture a photo, the photo resolution will change to 5M or below.

Adjusting your photos P

Adjust the sharpness, saturation, or contrast of your photos.

1 In Shooting mode, press [**MENU**].

2 Select **Shooting** → **Image Adjust**.

3 Select an option.

- Contrast
- Sharpness
- Saturation

4 Adjust each value.

Contrast	Description
-	Decrease the color and brightness.
+	Increase the color and brightness.

Sharpness	Description
-	Soften the edges on your photos (suitable for editing the photos on your computer).
+	Sharpen the edges to improve the clarity of your photos. This may also increase the noise on your photos.

Saturation	Description
-	Decrease the saturation.
+	Increase the saturation.

- Select 0 if you do not want to apply any effects (suitable for printing).
- If you set adjustment functions, you cannot use the Face Recognition and Smart Filter options.

Playback/Editing

Learn how to play back photos, videos, or voice memos and edit photos or videos.
Also, learn how to connect your camera to your computer, photo printer, TV, or HDTV.

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Viewing photos or videos in Playback mode

Learn how to play back photos, videos, or voice memos and how to manage files.

Starting Playback mode

View photos or play videos and voice memos stored in your camera.

1 Press [▶].

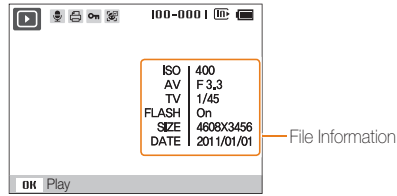
- The most recent file will be displayed.
- If the camera is off, it will turn on and display the most recent file.

2 Press [⚡] or [⏲] to scroll through files.

- Press and hold [⚡] or [⏲] to scroll through files quickly.

- If you want to view files stored in the internal memory, remove your memory card.
- The camera will not properly play back files of unsupported sizes or files that were captured with other cameras.

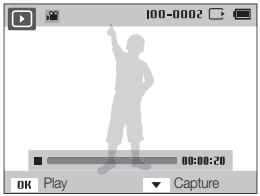
Photo file information



Icon	Description
	Photo includes a voice memo
	Print order has been set (DPOF)
	Protected file
	Photo includes a registered face (available only when you use a memory card)
100-0001	Folder name – File name

To display file information on the screen, press [**DISP**].

Video file information



Icon	Description
	Video file
00:00:20	Video length

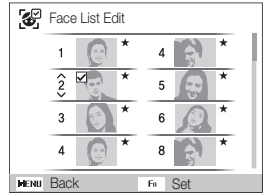
Ranking your favorite faces

You can rank your favorite faces. The favorite face feature is available only when you insert a memory card into the camera.

1 In Playback mode, press [**MENU**].

2 Select **File Options** → **Face List Edit** → **Edit Ranking**.

3 Select a face from the list, and then press [**OK**].



4 Press [**DISP**] or [ ] to change the ranking of the face, and then press [**Fn**].

Canceling your favorite faces

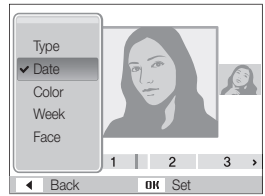
You can delete your favorite faces. The favorite face feature is available only when you insert a memory card into the camera.

1. In Playback mode, press [**MENU**].
2. Select **File Options** → **Face List Edit** → **Delete**.
3. Select a face, and then press [**OK**].
4. Press [**Fn**].
5. Select **Yes**.

Viewing files by category in Smart Album

View files by category, such as date, face, or file type.

1. In Playback mode, rotate [**Zoom**] to the left.
2. Press [**MENU**].
3. Select a category.



Option	Description
Type	View files by the file type.
Date	View files by the date they were saved.
Color	View files by the dominant color of the image.
Week	View files by the weekday they were saved.
Face	View files by recognized faces and favorite faces. (Up to 20 people)

4 Press [ ] or [ ] to scroll through files.
- Press and hold [ ] or [ ] to scroll through files quickly.

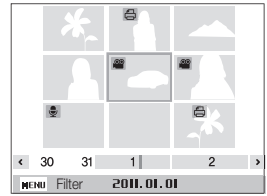
5 Press [**OK**] to return to the normal view.

- It may take some time for the camera to open Smart Album, change the category, or reorganize files.
- The front display may not activate after you access Smart Album.

Viewing files as thumbnails

Scan thumbnails of files.

In Playback mode, rotate [**Zoom**] to the left to view thumbnails (9 at a time). Rotate [**Zoom**] to the left once or twice more to display more thumbnails (20 at a time). Rotate [**Zoom**] to the right to return to the previous view.



To	Description
Scroll through files	Press [**DISP**], [ ], [ ], or [ ].
Delete files	Press [**Fn**], and then select **Yes**.

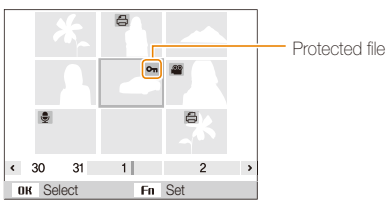
Protecting files

Protect your files from accidental deletion.

1 In Playback mode, press [**MENU**].

2 Select **File Options** → **Protect** → **Select**.
- To protect all files, select **All** → **Lock**.

3 Select the file you want to protect, and then press [**OK**].
- Press [**OK**] again to cancel your selection.



4 Press [**Fn**].

You cannot delete or rotate a protected file.

Deleting files

Select files to delete in Playback mode.

Deleting a single file

You can select one file, and then delete it.

1 In Playback mode, select a file, and then press [**Fn**].

2 When the pop-up message appears, select **Yes**.

Deleting multiple files

You can select multiple files, and then delete them at once.

1 In Playback mode, press [**Fn**].

2 When the pop-up message appears, select **Multiple Delete**.

3 Select files you want to delete, and then press [**OK**].
- Press [**OK**] again to cancel your selection.

4 Press [**Fn**].

5 When the pop-up message appears, select **Yes**.

If you delete a category, all files in the category will be deleted.

Deleting all files

You can select all files, and then delete them at once.

1. In Playback mode, press [**MENU**].
2. Select **File Options** → **Delete** → **All**.
3. When the pop-up message appears, select **Yes**.

Copying files to a memory card

Copy files from the internal memory to a memory card.

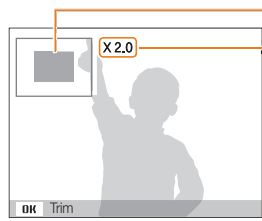
1. In Playback mode, press [**MENU**].
2. Select **File Options** → **Copy to Card**.
3. When the pop-up message appears, select **Yes**.

Viewing photos

Enlarge part of a photo or view photos as a slide show.

Enlarging a photo

In Playback mode, rotate [**Zoom**] to the right to enlarge a portion of the photo. Rotate [**Zoom**] to the left to zoom out.



Enlarged area

Zoom ratio (The maximum zoom ratio differs depending on the photo resolution.)

To	Description
Move the enlarged area	Press [**DISP**], [✿], [ϟ], or [⏲].
Trim the enlarged photo	Press [**OK**] (it will be saved as a new file).

When you view photos that were captured by another camera, the zoom ratio may differ.

Playing a slide show

Apply effects and audio to a slide show of your photos. The slide show function does not work for videos or voice memos.

1 In Playback mode, press [**MENU**].

2 Select **Multi Slide Show**.

3 Select a slide show effect option.

- Skip to step 4 to start a slide show with no effects.

* Default

Option	Description
Start	Set whether or not to repeat the slide show. (**Play**, **Repeat**)
Images	Set the photos you want to view as a slide show. • **All***: View all photos in a slide show. • **Date**: View photos captured on a specific date in a slide show. • **Select**: View selected photos in a slide show.
Interval	• Set the interval between photos. (**1 sec***, **3 sec**, **5 sec**, **10 sec**) • You must set the Effect option to **Off** to set the interval.
Music	Set background audio. (**Off***, **Mist**, **Drops**, **Muse**, **Trip**, **Fall**)
Effect	• Set a scene change effect between photos. (**Off***, **Calm**, **Shine**, **Relax**, **Lively**, **Sweet**) • Select **Off** to cancel effects. • When you use the Effect option, the interval between photos will be set to 1 second.

4 Select **Start** → **Play**.
- Select **Repeat** to loop the slide show.

5 View the slide show.
- Press [**OK**] to pause the slide show.
- Press [**OK**] again to resume the slide show.

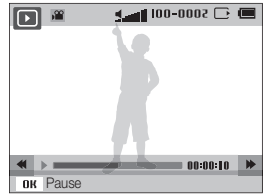
Press [**OK**], and then press [ϟ] or [⏲] to stop the slide show and switch to Playback mode.

Playing a video

In Playback mode, you can view a video, and then capture or trim parts of the playing video. You can save the captured or trimmed segments as new files.

1 In Playback mode, select a video, and then press [**OK**].

2 View the video.



To	Description
Scan backward	Press [ϟ].
Pause or resume playback	Press [**OK**].
Scan forward	Press [⏲].
Adjust the volume level	Rotate [**Zoom**] to the left or right.

Trimming a video

1 While viewing a video, press [**OK**] at the point where you want the trimming to begin.

2 Rotate [**Zoom**] to the right, and then press [**OK**].

3 Press [**OK**] at the point where you want the trimming to end.

4 Rotate [**Zoom**] to the right.

5 When the pop-up message appears, select **Yes**.

- The original video should be at least 10 seconds long.
- The camera will save the edited video as a new file.

Capturing an image from video

1 While viewing a video, press [**OK**] at the point where you want to capture an image.

2 Press [ ].

- The resolution of the captured image will be the same as the original video.
- The captured image is saved as a new file.

Playing a voice memo

Listening to a voice memo

1 In Playback mode, select a voice memo, and then press [**OK**].

2 Listen to the voice memo.

To	Description
Scan backward	Press [◀].
Pause or resume playback	Press [**OK**].
Scan forward	Press [▶].
Stop playback	Press [✿].
Adjust the volume level	Rotate [**Zoom**] to the left or right.

Adding a voice memo to a photo

1 In Playback mode, select a photo, and then press [**MENU**].

2 Select **File Options** → **Voice Memo** → **On**.

3 Press [**Shutter**] to record a short voice memo.
- Maximum recording time is 10 seconds.
- Press [**Shutter**] to stop recording a voice memo.

Playing voice memos that are attached to photos

1 In Playback mode, select a photo that includes a voice memo, and then press [**OK**].

2 Listen to a voice memo.
- Press [**OK**] to pause playback.
- Press [**OK**] to resume playback.

Editing a photo

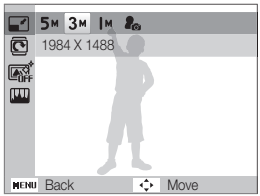
Learn how to edit photos.

- The camera will save edited photos as new files.
- When you edit photos, the camera will automatically convert them to a lower resolution. Photos that you rotate or resize manually are not automatically converted to a lower resolution. Rotated photos overwrite the original files.

Resizing photos

Change the size of a photo and save it as a new file. You can set a photo to be displayed when the camera turns on.

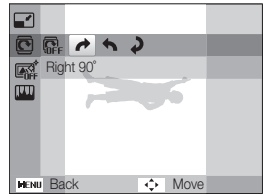
1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Resize**.
3. Select an option.
   - Select **Start Image** to save the photo as a start image. (p. 96)



Available resize options differ depending on the original size of the photo.

Rotating a photo

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Rotate**.
3. Select an option.

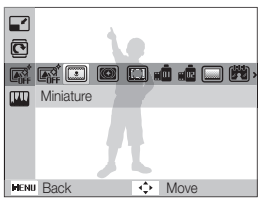


The camera will overwrite the original file.

Applying Smart Filter effects

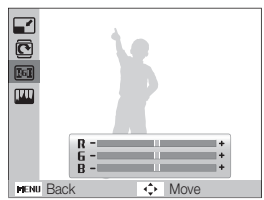
Apply special effects to your photos.

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Smart Filter**.
3. Select an effect.
   - To see available filter options, refer to page 64.



Defining your own RGB tone

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Smart Filter**.
3. Select **Custom RGB**.
4. Select a color (R: Red, G: Green, B: Blue).



5. Adjust the amount of the selected color.
6. Press [**OK**] to save.

Adjusting your photos

Learn how to adjust the brightness, contrast, or saturation or how to correct the red-eye effect. If the center of a photo is dark, you can adjust it to be brighter. The camera will save an edited photo as a new file, but may convert it to a lower resolution.

Adjusting dark subjects (ACB)

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Image Adjust** → **ACB**.
3. Press [**OK**] to save.

Removing red-eye

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Image Adjust** → **Red-eye Fix**.
3. Press [**OK**] to save.

Retouching faces

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Image Adjust** → **Face Retouch**.
3. Select a level.
   - As the number increases, the skin tone becomes brighter.
4. Press [**OK**] to save.

Adjusting brightness, contrast, or saturation

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Image Adjust**.
3. Select an adjusting option.

Icon	Description
☀	Brightness
◐	Contrast
♣	Saturation

4. Adjust the option.
5. Press [**OK**] to save.

Adding noise to the photo

1. In Playback mode, select a photo, and then press [**MENU**].
2. Select **Edit** → **Image Adjust** → **Add Noise**.
3. Press [**OK**] to save.

Creating a print order (DPOF)

Select photos to print and save print options in the Digital Print Order Format (DPOF). This information is saved in the MISC folder on your memory card for convenient printing on DPOF-compatible printers.

1. In Playback mode, press [**MENU**].
2. Select **File Options** → **DPOF** → **Standard** → **Select**.
   - Select **All** to print all photos.
3. Select a photo to print, rotate [**Zoom**] to the left or right to select the number of copies, and then press [**Fn**].
   - If you select **All**, press [**DISP**] or [✿] to select the number of copies, and then press [**OK**].
4. Press [**MENU**].
5. Select **File Options** → **DPOF** → **Size** → **Select**.
   - Select **All** to choose the print size for all photos.
6. Select a photo to print, rotate [**Zoom**] to the left or right to select the print size, and then press [**Fn**].
   - If you select **All**, press [**DISP**] or [✿] to select the print size, and then press [**OK**].

Printing photos as thumbnails

Print photos as thumbnails to check all the photos at once.

1 In Playback mode, press [**MENU**].

2 Select **File Options** → **DPOF** → **Index**.

3 When the pop-up message appears, select **Yes**.

- You can take the memory card to a print shop that supports DPOF (Digital Print Order Format) or you can print photos directly through a DPOF-compatible printer at home.
- Photos with dimensions that are wider than the paper may be cut off on the left and right edges. Ensure that your photo dimensions are compatible with the paper you select.
- You cannot set DPOF options for photos stored in the internal memory.
- If you specify the print size, you can print photos only with DPOF 1.1-compatible printers.

Viewing files on a TV or HDTV

Play back photos or videos by connecting your camera to a TV with the A/V cable.

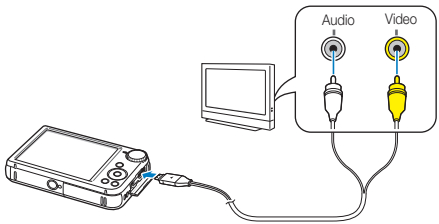
1 In Shooting or Playback mode, press [**MENU**].

2 Select **Settings** → **Video Out**.

3 Select a video signal output for your country or region. (p. 98)

4 Turn off your camera and TV.

5 Connect your camera to your TV with the A/V cable.



6 Turn on your TV, and then select a video output mode with the TV remote control.

7 Turn on your camera.

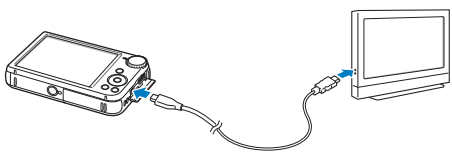
8 View photos or play videos using the camera buttons.

- Depending on the TV model, you may see some digital noise or part of an image may not appear.
- Images may not be centered on the TV screen depending on your TV settings.

Viewing files on an HDTV

You can view high-quality and uncompressed photos or videos on an HDTV using the optional HDMI cable. HDMI (High Definition Multimedia Interface) is supported by most HDTVs. For details, see the HDMI Kit manual.

1. In Shooting or Playback mode, press [**MENU**].
2. Select **Settings** → **HDMI Output**.
3. Select an HDMI resolution.
4. Turn off your camera and HDTV.
5. Connect your camera to your HDTV using the optional HDMI cable.



6. Turn on your camera.
   - If you have an Anynet+ compatible Samsung HDTV, the HDTV will turn on automatically and display the camera screen.
   - If you turn Anynet+ off, the HDTV does not turn on automatically.
7. View files using the buttons on your camera or a remote control of your HDTV.

- If your HDTV supports the Anynet+(CEC) profile, turn Anynet+ on in the camera's settings menu (p. 98) to control the camera and TV with the TV's remote control.
- Anynet+ lets you control all connected Samsung A/V devices with the TV remote control.
- The time it takes for the camera to connect to your HDTV may vary with the type of microSD or microSDHC card you use. A faster microSD or microSDHC card will not necessarily result in a faster HDMI transfer, because the main function of the card is to improve transfer rate during shooting.

Transferring files to your Windows computer

Transfer files to your Windows computer, edit them with Intelli-studio, and upload them to the web.

Requirements

Item	Requirements
CPU	Intel Pentium 4, 3.2 GHz or higher/ AMD Athlon™ FX 2.6 GHz or higher
RAM	Minimum 512 MB RAM (1 GB or more recommended)
OS	Windows XP SP2, Windows Vista, or Windows 7 (32-bit editions)
Hard disk capacity	250 MB or more (1 GB and above recommended)
Others	• CD-ROM drive • 1024 X 768 pixels, 16-bit color display compatible monitor (1280 X 1024 pixels, 32-bit color display recommended) • USB 2.0 port • nVIDIA Geforce 7600GT or higher/ATI X1600 series or higher • Microsoft DirectX 9.0c or higher

* The programs may not work properly on 64-bit editions of Windows XP, Windows Vista, and Windows 7.

- The requirements are recommendation only. It may not work properly even when the computer meets the requirements, depending on the condition of your computer.
- If your computer does not meet the requirements, videos may not play correctly or it may take longer to edit videos.
- Install DirectX 9.0c or above before you use the program.
- Your computer must be running Windows XP, Windows Vista, Windows 7, or Mac OS 10.4 or higher for you to connect the camera as a removable disk.

The manufacturer is not responsible for any damages that result from using unqualified computers such as assembled computers.

Transferring files with Intelli-studio

Intelli-studio will start automatically when you connect the camera to your computer with the USB cable.

The battery will charge while the camera is connected to a computer with the USB cable.

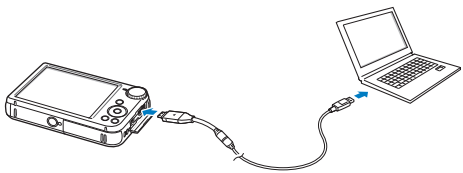
1 In Shooting or Playback mode, press [**MENU**].

2 Select **Settings** → **PC Software** → **On**.

3 Turn off the camera.

4 Connect the camera to your computer with the USB cable.

You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



5 Turn on the camera.

- The computer recognizes the camera automatically and Intelli-studio launches automatically.

If you set the USB option to **Select Mode**, select **Computer** in the pop-up window.

6 Select a destination folder on your computer, and then select **Yes**.

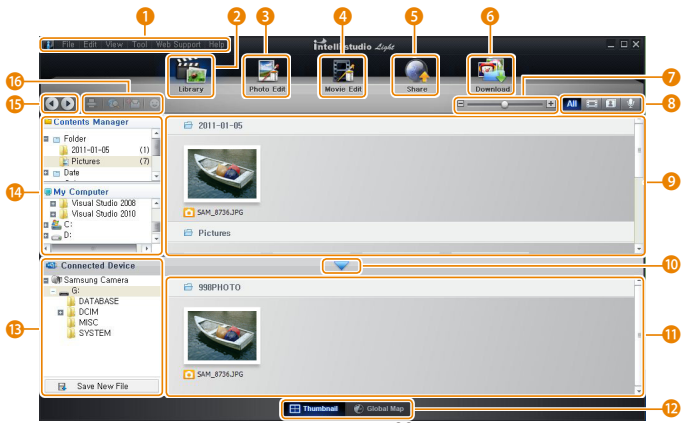
- New files stored on the camera will automatically transfer to the selected folder.
- If your camera has no new files, the pop-up window for saving new files will not appear.

For Windows Vista and Windows 7, select **Run iStudio.exe** from the Auto Play window to start Intelli-studio.

Using Intelli-studio

Intelli-studio is a built-in program that allows you to play back and edit files. For details, select **Help** → **Help** from the program toolbar.

- To enjoy more features, such as creating slide shows with templates, install the full version of Intelli-studio by selecting **Web Support** → **Update Intelli-studio** → **Start Update** from the program toolbar.
- You can update the firmware of your camera by selecting **Web Support** → **Upgrade firmware for the connected device** from the program toolbar.
- When you launch Intelli-studio with your camera connected to your computer, you can download short animations for use in Children mode. Also, you can use Intelli-studio to edit videos you have captured, and then play them on the front display.
- If you install Intelli-studio on your computer, the program will launch more quickly. To install the program, select **Tool** → **Install Intelli-studio on PC**.
- You cannot edit files directly on the camera. Transfer files to a folder on your computer before editing.
- Intelli-studio supports the following formats:
  - Videos: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9), AVI (MJPEG)
  - Photos: JPG, GIF, BMP, PNG, TIFF
- The screenshot below appears differently when you launch Intelli-studio without connecting the camera to your computer.



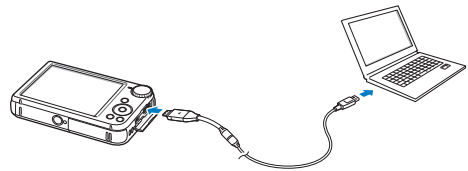
No.	Description
❶	Open menus.
❷	Display files in the selected folder.
❸	Switch to the Photo edit mode.
❹	Switch to the Video edit mode.
❺	Switch to the Sharing mode (to send files by email or upload files to websites, such as Flickr or YouTube).
❻	Download short animations for use in Children mode.
❼	Enlarge or reduce the thumbnails in the list.
❽	Select a file type.
❾	View files in the selected folder on your computer.
❿	Show or hide files on the connected camera.
⓫	View files in the selected folder on the camera.
⓬	View files as thumbnails or on a map.
⓭	Browse folders stored on the camera.
⓮	Browse folders stored on your computer.
⓯	Move to the previous or next folder.
⓰	Print files, view files on a map, store files in My Folder, or register faces.

Transferring files by connecting the camera as a removable disk

Connect the camera to your computer as a removable disk.

1. In Shooting or Playback mode, press [**MENU**].
2. Select **Settings** → **PC Software** → **Off**.
3. Turn off the camera.
4. Connect the camera to your computer with the USB cable.

> You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



5 Turn on the camera.
- The computer recognizes the camera automatically.

If you set the USB option to **Select Mode**, select **Computer** in the pop-up window.

6 On your computer, select **My Computer** → **Removable Disk** → **DCIM** → **100PHOTO**.

7 Drag or save files to your computer.

Disconnecting the camera (for Windows XP)

With Windows Vista and Windows 7, the methods for disconnecting the camera are similar.

1 If the status lamp on your camera is blinking, wait until it stops.

2 Click on the tool bar at the bottom right of your computer screen.

3 Click the pop-up message.

4 Click the message box indicating safely removed.

5 Remove the USB cable.

The camera may not disconnect safely while Intelli-studio is running. End the program before disconnecting the camera.

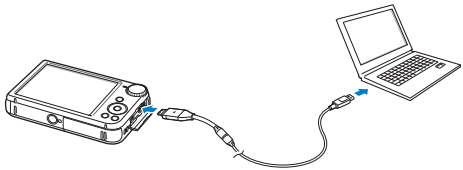
Transferring files to your Mac computer

When you connect the camera to a Macintosh computer, the computer will automatically recognize the device. You can transfer files directly from the camera to the computer without installing any programs.

Mac OS 10.4 or later is supported.

1 Connect your camera to a Macintosh computer with the USB cable.

You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



2 Turn on the camera.

- The computer recognizes the camera automatically and displays a removable disk icon.

If you set the USB option to **Select Mode**, select **Computer** in the pop-up window.

3 Double-click the removable disk icon.

4 Drag or save files to your computer.

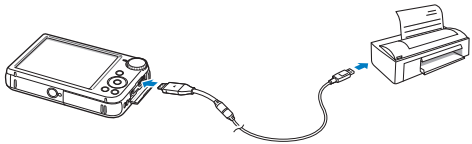
Printing photos with a PictBridge photo printer

Print photos with a PictBridge-compatible printer by connecting your camera directly to the printer.

1 In Shooting or Playback mode, press [**MENU**].

2 Select **Settings** → **USB** → **Printer**.

3 Turn on the printer, and then connect your camera to the printer with the USB cable.



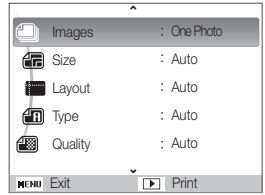
4 If the camera is off, press [**POWER**] or [▶] to turn it on.
- The printer recognizes the camera automatically.

5 Press [ϟ] or [⏲] to select a file to print.
- Press [**MENU**] to set printing options. See "Configuring print settings."

6 Press [**OK**] to print.
- Printing starts. Press [ϟ] to cancel printing.

Configuring print settings

Press [**MENU**] to configure print settings.



Icon	Description
	Images: Select whether to print the current photo or all photos.
	Size: Set the print size.
	Layout: Set the number of photos to be printed on a single sheet of paper.
	Type: Set the type of paper.
	Quality: Set the print quality.
	Date: Set to print the date.
	File Name: Set to print the file name.
	Reset: Reset settings to their default values.

Some options may not be supported by some printers.

Settings

Refer to options to configure your camera's settings.

Settings menu 94
- Accessing the settings menu 94
- Sound 95
- Front Display Settings 95
- Display 96
- Settings 97

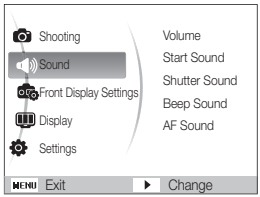
Settings menu

Learn to configure your camera's settings.

Accessing the settings menu

1 In Shooting or Playback mode, press [**MENU**].

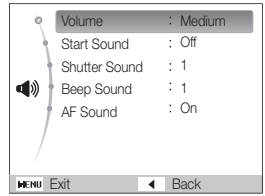
2 Select a menu.



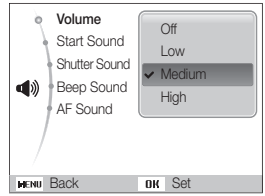
Option	Description
Sound	Set various camera sounds and the volume. (p. 95)
Front Display Settings	Customize the front display settings. (p. 95)
Display	Customize the main display settings. (p. 96)
Settings	Customize the settings for the camera system, such as memory format, default file name, and USB mode. (p. 97)

You can customize the front display settings only when you access the settings menu from the Shooting mode.

3 Select an item.



4 Select an option.



5 Press [**MENU**] to return to the previous screen.

Sound

* Default

Item	Description
Volume	Set the volume of any sound. (**Off**, **Low**, **Medium***, **High**)
Start Sound	Set the sound the camera emits when you turn on your camera. (**Off***, **1**, **2**, **3**)
Shutter Sound	Set the sound the camera emits when you press the shutter button. (**Off**, **1***, **2**, **3**)
Beep Sound	Set the sound the camera emits when you press the buttons or switch modes. (**Off**, **1***, **2**, **3**)
AF Sound	Set to emit a sound when you half-press the shutter button. (**Off**, **On***)

Front Display Settings

* Default

Item	Description
Front Smile Shot	Set the camera to automatically release the shutter when it detects a smiling face in Self Shot mode. (**Off***, **On**)
Children Smile Shot	Set the camera to automatically release the shutter when it detects a smiling face in Children mode. (**Off***, **On**)
Children Sound	Set a sound the camera emits in Children mode. (**Off**, **1***, **2**, **3**, **4**, **5**)
Front Display Demo	Set the camera to play the animation with sound through the front display when you turn it on (for shop display). (**Off***, **On**) • In Demo mode, you cannot capture photos or record videos. Press [**Shutter**] to switch to Shooting mode. • The Demo mode is not available if you turn on the camera in Playback mode or when the camera is connected to another device.

Display

* Default

Item	Description
Function Description	Display a brief description of an option or menu. (**Off**, **On***)
Start Image	Set a start image to display when the camera turns on. • **Off***: Display no start image. • **Logo**: Display a default image stored in the internal memory. • **User Image**: Display a custom image. (p. 79) • The camera will save only one User Image in the internal memory at a time. • If you select a new photo as a User Image or reset your camera, the camera will delete the current image.
Display Brightness	Adjust the brightness of the screen. (**Auto**, **Dark**, **Normal**, **Bright***) **Normal** is fixed in Playback mode even if you have selected **Auto**.

* Default

Item	Description
Quick View	Set the duration for reviewing a captured image before returning to the Shooting mode. (**Off**, **0.5 sec***, **1 sec**, **3 sec**)
Power Save	If you perform no operations for 30 seconds, the camera automatically switches to Power save mode. (**Off***, **On**) • In Power save mode, press any button other than [**POWER**] to resume using the camera. • Even if you do not set the Power save mode, the screen will dim 30 seconds after the last operation to save power.

Settings

* Default

Item	Description
Format	Format the internal memory and the memory card (formatting will delete all files, including protected files). (**Yes**, **No**) Errors can occur if you use a memory card formatted by another brand of camera, a memory card reader, or a computer. Please format memory cards in the camera before using them to capture photos.
Reset	Reset menus and shooting options (date and time, language, and video output settings will not be reset). (**Yes**, **No**)
Language	Set a language for the display text.
Time Zone	Set the time zone for your location. When you travel to another country, select the appropriate time zone.
Date/Time Set	Set the date and time.
Date Type	Set a date format. (**YYYY/MM/DD**, **MM/DD/YYYY**, **DD/MM/YYYY**, **Off***)

* Default

Item	Description
File No.	Specify how to name files. • **Reset**: Set the file number to start from 0001 when you insert a new memory card, format a memory card, or delete all files. • **Series***: Set the file number to resume from the previous file number when you insert a new memory card, format a memory card, or delete all files. • The default name of the first folder is 100PHOTO and the default name of the first file is SAM_0001. • The file number increases one at a time from SAM_0001 to SAM_9999. • The folder number increases one at a time from 100PHOTO to 999PHOTO. • The maximum number of files that can be stored in one folder is 9,999. • The camera defines file names according to the Design rule for Camera File system (DCF) standard. If you intentionally change file names, the camera may not play back the files.

* Default

Item	Description
Imprint	Set whether or not to display the date and time on captured photos. (**Off***, **Date**, **Date & Time**) • The date and time will be displayed on the bottom right corner of the photo. • Some printer models may not print the date and time properly. • If you select **Text** in **SCN** mode or capture a photo with the front display, the camera will not display the date and time.
Auto Power Off	Set the camera to automatically turn off when you perform no operations for a specified period. (**Off**, **1 min**, **3 min***, **5 min**, **10 min**) • Your settings will not change when you replace the battery. • The camera will not automatically turn off when the camera is connected to a computer or printer, when you are playing a slide show or videos, and when you are recording a voice memo.

* Default

Item	Description
Video Out	Set the video signal output for your region. • **NTSC***: USA, Canada, Japan, Korea, Taiwan, Mexico • **PAL** (supports only BDGHI): Australia, Austria, Belgium, China, Denmark, England, Finland, Germany, Italy, Kuwait, Malaysia, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, Thailand
AF Lamp	Set a light to automatically turn on in dark places to help you focus. (**Off**, **On***)
Anynet+ (HDMI-CEC)	Set whether or not to control the camera with a TV remote control when you connect it to an HDTV that supports the Anynet+(CEC) profile. • **On***: Control the camera with an HDTV remote control. • **Off**: View files without using an HDTV remote control.

* Default

Item	Description
HDMI Output	Set the resolution of photos when the camera plays back files on an HDTV via the HDMI cable. (NTSC: **1080i***, **720p**, **480p**/ PAL: **1080i***, **720p**, **576p**) • If the HDTV does not support the selected resolution, the HDTV automatically selects the next lower resolution. • If you select **480p** or **576p**, the playback menus and Smart Album will not be available when you connect the camera to a TV.
USB	Select the mode to use when you connect the camera to a computer or printer with a USB cable. • **Computer***: Connect your camera to a computer for transferring files. • **Printer**: Connect your camera to a printer for printing files. • **Select Mode**: Manually select the USB mode when you connect your camera to a device.
PC Software	Set Intelli-studio to launch automatically when you connect your camera to your computer. (**Off**, **On***)

Appendixes

Get information about error messages, specifications, and maintenance.

Error messages 101
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Error messages

When the following error messages appear, try these remedies.

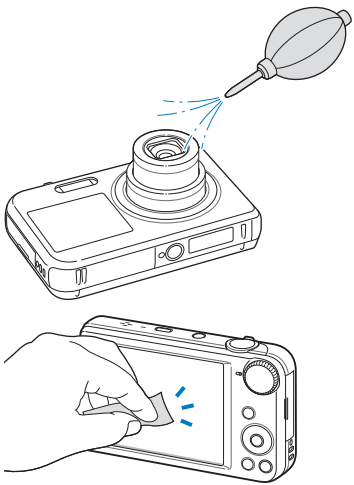
Error message	Suggested remedies
Card Error	• Turn off your camera, and then turn it on again. • Remove your memory card, and then insert it again. • Format your memory card.
Card not supported.	The inserted memory card is not supported by your camera. Insert a microSD or microSDHC memory card.
DCF Full Error	File names do not match the DCF standard. Transfer the files on the memory card to your computer, and then format the card.
File Error	Delete the damaged file or contact a service center.
File system not supported.	Your camera does not support the FAT file structure of the inserted memory card. Format the memory card on the camera.
Low Battery	Insert a charged battery or recharge the battery.
Memory Full	Delete unnecessary files or insert a new memory card.
No Image File	Capture photos or insert a memory card that contains some photos.

Camera maintenance

Cleaning your camera

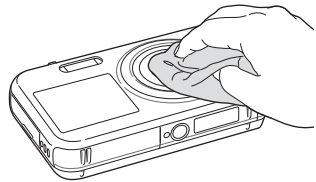
Camera lens and display

Use a blower brush to remove dust and wipe the lens gently with a soft cloth. If any dust remains, apply lens cleaning liquid to a piece of cleaning paper and wipe gently.



Camera body

Wipe gently with a soft, dry cloth.



- Never use benzene, thinners, or alcohol to clean the device. These solutions can damage the camera or cause it to malfunction.
- Do not press on the lens cover or use a blower brush on the lens cover.

Using or storing the camera

Inappropriate places to use or store the camera

- Avoid exposing the camera to very cold or very hot temperatures.
- Avoid using your camera in areas with extremely high humidity, or where the humidity changes drastically.
- Avoid exposing the camera to direct sunlight and storing it in hot, poorly-ventilated areas, such as in a car during summer time.
- Protect your camera and the display from impact, rough handling, and excessive vibration to avoid serious damage.
- Avoid using or storing your camera in dusty, dirty, humid, or poorly-ventilated areas to prevent damage to moving parts and internal components.
- Do not use your camera near fuels, combustibles, or flammable chemicals. Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the camera or its accessories.
- Do not store the camera where there are mothballs.

Using on beaches or shores

- Protect your camera from sand and dirt when you use it on beaches or in other similar areas.
- Your camera is not waterproof. Do not handle the battery, adapter, or memory card with wet hands. Operating the camera with wet hands may cause damage to your camera.

Storing for extended period of time

- When you store the camera for an extended period, place it in a sealed container with an absorbent material, such as silica gel.
- Remove the batteries from your camera when storing it for an extended period. Installed batteries may leak or corrode over time and cause serious damage to your camera.
- Over time, unused batteries will discharge and must be recharged before use.

Use the camera with caution in humid environments

When you transfer the camera from a cold environment to a warm one, condensation can form on the lens or internal components of the camera. In this situation, turn off the camera and wait for at least 1 hour. If condensation forms on the memory card, remove the memory card from the camera and wait until all moisture has evaporated before reinserting it.

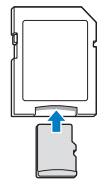
Other cautions

- Do not swing your camera by the strap. This may cause injury to yourself or others or damage to your camera.
- Do not paint your camera, as paint can clog moving parts and prevent proper operation.
- Turn off the camera while not in use.
- Your camera consists of delicate parts. Avoid impacts to the camera.
- Protect the display from external force by keeping it in the case when not in use. Protect the camera from scratches by keeping it away from sand, sharp implements, or loose change.
- Do not expose the lens to direct sunlight, as this may discolor the image sensor or cause it to malfunction.
- Protect your lens from fingerprints and scratches. Clean your lens with a soft, clean, debris-free lens cloth.
- The camera may turn off if impacted from the outside. This is to protect the memory card. Turn on the camera to use it again.
- While you use the camera, it may heat up. This is normal and should not affect your camera's lifespan or performance.
- When you use the camera in low temperatures, it may take some time to turn on, the color may be changed temporarily, or after-images may appear. These conditions are not malfunctions and they will correct themselves when the camera is returned to normal temperatures.
- Paint or metal on the outside of the camera may cause allergies, itchy skin, eczema, or swelling for people with sensitive skin. If you experience any of these symptoms, stop using the camera immediately and consult a doctor.
- Do not insert foreign objects into any of your camera's compartments, slots, or access points. Damage due to improper use may not be covered by your warranty.
- Do not allow unqualified personnel to service the camera or attempt to service the camera yourself. Any damage that results from unqualified service is not covered by your warranty.

About memory cards

Supported memory cards

Your camera supports microSD (Secure Digital) or microSDHC (Secure Digital High Capacity) memory cards.



To read data with a PC or memory card reader, insert the memory card into a memory card adapter.

Memory card capacity

The memory capacity may differ depending on shooting scenes or shooting conditions. These capacities are based on a 1 GB microSD card:

	Size	Super Fine	Fine	Normal	30 FPS	15 FPS
Photos	16M	108	212	312	-	-
	14M	123	241	353	-	-
	12M	144	283	417	-	-
	10M	170	332	482	-	-
	5M	328	624	882	-	-
	3M	537	980	1,373	-	-
	2M	882	1,471	1,931	-	-
	1M	1,626	2,575	3,090	-	-
* Videos	1280 HQ	-	-	-	Approx. 12' 49"	Approx. 23' 23"
	1280	-	-	-	Approx. 14' 27"	Approx. 26' 04"
	640	-	-	-	Approx. 25' 00"	Approx. 48' 02"
	320	-	-	-	Approx. 73' 27"	Approx. 94' 20"

* Available recording time may vary if you use the zoom. Several videos were recorded in succession to determine the total recording time.

Cautions when using memory cards

- Insert a memory card in the correct direction. Inserting a memory card in the wrong direction may damage your camera and memory card.
- Do not use memory cards that have been formatted by other cameras or by a computer. Reformat the memory card with your camera.
- Turn off the camera when you insert or remove the memory card.
- Do not remove the memory card or turn off your camera while the lamp is blinking, as this may damage your data.
- When the lifespan of a memory card has expired, you cannot store any more photos on the card. Use a new memory card.
- Do not bend, drop, or subject memory cards with heavy impact or pressure.
- Avoid using or storing memory cards near strong magnetic fields.
- Avoid using or keeping memory cards in areas with high temperature, high humidity, or corrosive substances.
- Prevent memory cards from making contact with liquids, dirt, or foreign substances. If dirty, wipe the memory card clean with a soft cloth before you insert the memory card in your camera.
- Do not allow liquids, dirt, or foreign substances to come in contact with memory cards or the memory card slot. Doing so may cause memory cards or the camera to malfunction.

- When you carry a memory card, use a case to protect the card from electrostatic discharges.
- Transfer important data to other media, such as a hard disk, CD, or DVD.
- When you use the camera for an extended period, the memory card may become warm. This is normal and does not indicate a malfunction.

The manufacturer is not responsible for any loss of data.

About the battery

Use only Samsung-approved batteries.

Battery specifications

Specification	Description
Model	BP70A
Type	Lithium-ion battery
Cell capacity	740 mAh (min. 700 mAh)
Voltage	3.7 V
Charging time* (when the camera is switched off)	Approximately 150 min

* Charging the battery by connecting it to a computer may take longer.

Battery life

Average shooting time / Number of photos		Test conditions (when the battery is fully charged)
Photos	Approximately 90 min/ Approximately 180 photos	The battery life was measured under the following conditions: in **P** mode, 16M resolution, Fine quality, OIS on. 1. Set the flash option to **Fill in**, take a single shot, and zoom in or out. 2. Set the flash option to **Off**, take a single shot, and zoom in or out. 3. Perform steps 1 and 2 for 30 seconds and repeat for 5 minutes. Then turn off the camera for 1 minute. 4. Repeat steps 1 to 3.
Videos	Approximately 65 min	Record videos at 1280 X 720 HQ resolution and 30 FPS.

- The figures above are measured by Samsung's standards and may differ depending on actual usage.
- Several videos were recorded in succession to determine the total recording time.

Low battery message

When the battery charge has fully discharged, the battery icon will turn red and the "**Low Battery**" message will appear.

Notes about using the battery

- Avoid exposing batteries or memory cards to very cold or very hot temperatures (below 0 ºC/32 ºF or above 40 ºC/104 ºF). Extreme temperatures can reduce the charging capacity of your batteries and can cause memory cards to malfunction.
- When you use the camera for an extended period, the area around the battery chamber may become warm. This does not affect the normal use of the camera.
- Do not pull the power supply cord to disconnect the plug from the power outlet, as this may cause a fire or electric shock.
- In temperatures below 0 ºC/32 ºF, battery capacity and battery life may decrease.
- Battery capacity may decrease in low temperatures but will return to normal in milder temperatures.

Cautions about using the battery

Protect batteries, chargers, and memory cards from damage

Prevent batteries from making contact with metal objects, as this can create a connection between the + and – terminals of your battery and lead to temporary or permanent battery damage and may cause a fire or electric shock.

Notes about charging the battery

- If the indicator light is off, make sure that the battery is inserted correctly.
- If the camera is on while charging, the battery may not fully charge. Turn off the camera before charging the battery.
- Do not use your camera when you charge the battery. This may cause a fire or electric shock.
- Do not pull the power supply cord to disconnect the plug from the power outlet, as this may cause a fire or electric shock.
- Wait to turn on the camera until after the battery has charged for at least 10 minutes.
- If you connect the camera to an external power source while the battery is depleted, using some high energy-consuming functions will cause the camera to turn off. To use the camera normally, recharge the battery.

- Using the flash or recording videos depletes the battery quickly. Charge the battery until the indicator light turns green.
- If the indicator light blinks in orange or does not illuminate, reconnect the cable, or remove the battery and insert it again.
- If you charge the battery when the cable is overheated or the temperature is too high, the indicator light may turn orange. Charging will start when the battery cools down.
- Overcharging batteries may shorten battery life. After charging is finished, disconnect the cable from your camera.
- Do not bend or place heavy objects on the AC cable. Doing so may damage the cable.

Notes about charging with a computer connected

- Use only the provided USB cable.
- The battery may not charge when:
  - you use a USB hub
  - other USB devices are connected to your computer
  - you connect the cable to the port on the front side of your computer
  - the USB port of your computer does not support the power output standard (5 V, 500 mA)

Handle and dispose of batteries and chargers with care

- Never dispose of batteries in a fire. Follow all local regulations when you dispose of used batteries.
- Never place batteries or cameras on or in heating devices, such as microwave ovens, stoves, or radiators. Batteries may explode when they are overheated.

Personal injury or death can occur if the battery is handled carelessly or improperly. For your safety, follow these instructions for proper battery handling:

- The battery can ignite or explode if not handled properly. If you notice any deformities, cracks, or other abnormalities in the battery, immediately discontinue use of the battery and contact a service center.
- Use only authentic, manufacturer-recommend battery chargers and adapters and charge the battery only by the methods described in this user manual.
- Do not place the battery near heating devices or expose it to excessively warm environments, such as the inside of an enclosed car in the summertime.
- Do not place the battery in a microwave oven.
- Avoid storing or using the battery in hot, humid places, such as spas or shower enclosures.
- Do not rest the device on flammable surfaces, such as bedding, carpets, or electric blankets for a prolonged period.
- When the device is switched on, do not leave it in any confined space for a prolonged period.
- Do not allow battery terminals to come in contact with metallic objects, such as necklaces, coins, keys, or watches.
- Use only authentic, manufacturer-recommended, Lithium-ion replacement batteries.
- Do not disassemble or puncture the battery with any sharp object.
- Avoid exposing the battery to high pressure or crushing forces.
- Avoid exposing the battery to major impacts, such as dropping it from high places.
- Do not expose the battery to temperatures of 60 °C (140 °F) or above.
- Do not allow the battery to come in contact with moisture or liquids.
- Battery shall not be exposed to excessive heat such as sunshine, fire or the like.

Disposal guidelines

- Dispose of the battery with care.
- Do not dispose of the battery in a fire.
- Disposal regulations may differ by country or region. Dispose of the battery in accordance with all local and federal regulations.

Guidelines for charging the battery

Charge the battery only by the method described in this user manual. The battery can ignite or explode if not charged properly.

Before contacting a service center

If you are having trouble with your camera, try these troubleshooting procedures before you contact a service center. If you have attempted the suggested remedy and are still having problems with your device, contact your local dealer or service center.

When you leave your camera at a service center, be sure to also leave the other components that may have contributed to the malfunction, such as the memory card and battery.

Situation	Suggested remedies
Cannot turn on the camera	• Ensure that the battery is inserted. • Ensure that the battery is inserted correctly. (p. 16) • Charge the battery.
The power turns off suddenly	• Charge the battery. • Your camera may be in Power save mode. (p. 96) • The camera may turn off to prevent the memory card from being damaged due to an impact. Turn on your camera again.
The camera is losing battery power quickly	• The battery may lose power more quickly in low temperatures (below 0 °C/32 °F). Keep the battery warm by putting it into your pocket. • Using the flash or recording videos depletes the battery quickly. Recharge if needed. • Batteries are consumable parts that must be replaced over time. Get a new battery if the battery life is diminishing quickly.

Situation	Suggested remedies
Cannot capture photos	• There is no space on the memory card. Delete unnecessary files or insert a new card. • Format the memory card. • The memory card is defective. Get a new memory card. • Make sure that the camera is switched on. • Charge the battery. • Make sure that the battery is inserted correctly.
The camera freezes	Remove the battery and insert it again.
The camera heats up	While you use the camera, it may heat up. This is normal and should not affect your camera's lifespan or performance.
The flash does not work	• The flash option may be set to off. (p. 50) • You cannot use the flash in some modes.

Situation	Suggested remedies
The flash fires unexpectedly	The flash may fire due to static electricity. The camera is not malfunctioning.
The date and time are incorrect	Set the date and time in the display settings. (p. 97)
The display or buttons do not work	Remove the battery and insert it again.
The camera display responds poorly	If you use your camera at very low temperatures, it may cause the camera screen to malfunction or discolor. For better performance of your camera screen, use your camera in moderate temperatures.
The memory card has an error	• Turn off your camera and then turn it on again. • Remove your memory card and insert it again. • Format your memory card. See “Cautions when using memory cards” for more detail. (p. 105)
Cannot play back files	If you change the name of a file, your camera may not play the file (the name of the file should meet the DCF standard). If you encounter this situation, play back the files on your computer.

Situation	Suggested remedies
The photo is blurry	• Make sure that the focus option you set is suitable for close-up shots. (p. 52) • Make sure that the lens is clean. If not, clean the lens. (p. 102) • Make sure that the subject is within range of the flash. (p. 114)
The colors in the photo do not match the actual scene	An incorrect White Balance can create unrealistic color. Select the proper White Balance option to suit the light source. (p. 61)
The photo is too bright	Your photo is overexposed. • Turn off the flash. (p. 50) • Adjust the ISO sensitivity. (p. 51) • Adjust the exposure value. (p. 59)
The photo is too dark	Your photo is underexposed. • Turn on the flash. (p. 50) • Adjust the ISO sensitivity. (p. 51) • Adjust the exposure value. (p. 59)

Situation	Suggested remedies
The TV does not display your photos	• Make sure that the camera is correctly connected to the TV with the A/V cable. • Make sure that your memory card contains photos.
Your computer does not recognize your camera	• Make sure that the USB cable is connected correctly. • Make sure that your camera is switched on. • Make sure that you are using a supported operating system.
Your computer disconnects the camera while transferring files	The file transmission may be interrupted by static electricity. Disconnect the USB cable and connect it again.
Your computer cannot play videos	Videos may not play on some video player programs. To play video files captured with your camera, install and use the Intelli-studio program on your computer. (p. 87)
Intelli-studio is not functioning properly	• End Intelli-studio and restart the program. • You cannot use Intelli-studio on Macintosh computers. • Make sure that **PC Software** is turned **On** in the settings menu. (p. 99) • Depending on your computer's specifications and environment, the program may not launch automatically. In this case, click **Start** → **My Computer** → **Intelli-studio** → **iStudio.exe** on your computer.

Camera specifications

Image sensor	
Type	1/2.3" (Approximately 7.76 mm) CCD
Effective pixels	Approximately 16.1 mega-pixels
Total pixels	Approximately 16.4 mega-pixels
Lens	
Focal length	Samsung Lens f = 4.7 mm-23.5 mm (35 mm film equivalent: 26 mm-130 mm)
F-stop range	F3.3 (W)-F5.9 (T)
Digital zoom	• Still image mode: 1.0X-5.0X (Optical zoom X Digital zoom: 25.0X) • Playback mode: 1.0X-14.4X
Display	
Type	TFT LCD
Feature	• Main display: 3.0" (7.6 cm) QVGA (230K) • Front display: 1.5" (3.8 cm) 61 K TFT LCD

Focusing			
Type	TTL auto focus (Multi AF, Center AF, Face Detection AF, Tracking AF, Smart Face Recognition AF)		
Range		Wide (W)	Tele (T)
	Normal (AF)	80 cm-infinity	150 cm-infinity
	Macro	5 cm-80 cm	100 cm-150 cm
	Auto Macro	5 cm-infinity	100 cm-infinity

Shutter speed

- Auto: 1/8-1/2,000 sec.
- Program: 1-1/2,000 sec.
- Night: 8-1/2,000 sec.
- Fireworks: 2 sec.

Exposure	
Control	Program AE
Metering	Multi, Spot, Center-weighted, Face Detection
Compensation	±2EV (1/3 EV Step)
ISO equivalent	Auto, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200

Flash	
Mode	Auto, Red-eye, Fill in, Slow Sync, Off, Red-eye Fix
Range	• Wide: 0.2 m-3.5 m (ISO Auto) • Tele: 0.5 m-2.0 m (ISO Auto)
Recharging time	Approximately 4 sec.
Shake reduction	
DUAL IS [Optical Image Stabilization (OIS) + Digital Image Stabilization (DIS)]	
Effect	
Photo Shooting mode	• Smart Filter: Normal, Miniature, Vignetting, Soft Focus, Old Film 1, Old Film 2, Half Tone Dot, Sketch, Fish-eye, Defog, Classic, Retro, Negative, Custom RGB • Image Adjust: Sharpness, Contrast, Saturation
Video Shooting mode	Smart Filter: Normal, Palette Effect 1, Palette Effect 2, Palette Effect 3, Palette Effect 4, Miniature, Vignetting, Half Tone Dot, Sketch, Fish-eye, Defog, Classic, Retro, Negative, Custom RGB
White Balance	
Auto WB, Daylight, Cloudy, Fluorescent_H, Fluorescent_L, Tungsten, Measure: Shutter (Custom Set)	

Date Imprinting	
Date & Time, Date, Off	
Shooting	
Photos	• Modes: Smart Auto (Portrait, Night Portrait, Backlight Portrait, Night, Backlight, Landscape, White, Natural Green, Blue Sky, Sunset, Macro, Macro text, Macro Color, Tripod, Action, Fireworks), Auto, Program, DUAL IS, Beauty Shot, Night, Scene (Magic Frame, Object Highlight, Landscape, Text, Sunset, Dawn, Backlight, Beach & Snow) • Drive: Single, Continuous, Motion Capture, AEB • Timer: 10 Sec, 2 Sec, Double (10 Sec, 2 Sec)
Videos	• Modes: Smart Scene Detection (Landscape, Blue Sky, Natural Green, Sunset), Movie • Format: MP4 (H.264) (Max recording time: 20 min) • Size: 1280 X 720 HQ Fine, 1280 X 720 Normal, 640 X 480 Normal, 320 X 240 Normal • Frame Rate: 30 FPS, 15 FPS • Sound Alive: Sound Alive On, Sound Alive Off, Mute • OIS: On, Off • Video editing (embedded): Pause during recording, Still image capture, Time trimming

Playback	
Type	Single image, Thumbnails, Multi Slide Show with Music and Effect, Movie clip, Smart Album* * Smart Album category: Type, Date, Color, Week, Face
Edit	Resize, Rotate, Image Adjust, Smart Filter, Trim
Effect	• Image Adjust: Red-eye Fix, ACB, Face Retouch, Brightness, Contrast, Saturation, Add Noise • Smart Filter: Normal, Miniature, Vignetting, Soft-Focus, Old Film 1, Old Film 2, Half Tone Dot, Sketch, Fish-eye, Defog, Classic, Retro, Negative, Custom RGB

Voice recording
• Voice Recording (Maximum 10 hours) • Voice Memo in a photo (Maximum 10 sec.)

Storage	
Media	• Internal memory: Approximately 30 MB • External memory (Optional): microSD card (up to 2 GB guaranteed), microSDHC card (up to 8 GB guaranteed) Internal memory capacity may not match these specifications.

File format	• DCF, EXIF 2.21, DPOF 1.1, PictBridge 1.0 • Still Image: JPEG (DCF) • Movie Clip: MP4 (Video: MPEG-4.AVC/H.264, Audio: AAC) • Audio file: WAV
Image size	For 1 GB microSD: Number of photos

		Super Fine	Fine	Normal
16M	4608 X 3456	108	212	312
14M	4608 X 3072	123	241	353
12M	4608 X 2592	144	283	417
10M	3648 X 2736	170	332	482
5M	2592 X 1944	328	624	882
3M	1984 X 1488	537	980	1,373
2M	1920 X 1080	882	1,471	1,931
1M	1024 X 768	1,626	2,575	3,090

These figures are measured under Samsung's standard conditions and may vary depending on the shooting conditions and camera settings.

Interface	
Digital output connector	USB 2.0
Audio input/output	Internal speaker (Mono), Microphone (Mono)
Video output	• A/V: NTSC, PAL (selectable) • HDMI 1.4: NTSC, PAL (selectable)
DC power input connector	20 pin, 4.2 V
Power source	
Rechargeable battery	Lithium-ion battery (BP70A, 740 mAh: Min 700 mAh)

The power source may differ depending on your region.

Dimensions (W X H X D)
95.3 X 57.3 X 19.0 mm (without protrusions)
Weight
113.2 g (without battery and memory card)

Operating Temperature
0-40 °C
Operating Humidity
5-85 %
Software
Intelli-studio

Specifications may change without notice to improve performance.

Glossary

ACB (Auto Contrast Balance)

This feature automatically improves the contrast of your images when the subject is backlit or when there is a high contrast between your subject and the background.

AEB (Auto Exposure Bracket)

This feature automatically captures several images at different exposures to help you capture a properly-exposed image.

AF (Auto Focus)

A system that automatically focuses the camera lens on the subject. Your camera uses the contrast to focus automatically.

Aperture

The aperture controls the amount of light that reaches the camera's sensor.

Camera shake (Blur)

If the camera is moved while the shutter is open, the entire image may appear blurred. This occurs more often when the shutter speed is slow. Prevent camera shake by raising the sensitivity, using the flash, or using a faster shutter speed. Alternately, use a tripod, the DIS or OIS function to stabilize the camera.

Composition

Composition in photography means arranging objects in a photo. Usually, abiding by the rule of thirds leads to a good composition.

DCF (Design rule for Camera File system)

A specification to define a file format and file system for digital cameras created by the Japan Electronics and Information Technology Industries Association (JEITA).

Depth of field

The distance between the nearest and farthest points that can be acceptably focused in a photograph. Depth of field varies with lens aperture, focal length, and distance from the camera to the subject. Selecting a smaller aperture, for example, will increase the depth of field and blur the background of a composition.

Digital zoom

A feature that artificially increases the amount of zoom available with a zoom lens (Optical zoom). When using the Digital zoom, the image quality will deteriorate as the magnification increases.

DPOF (Digital Print Order Format)

A format for writing printing information, such as selected images and number of prints, on a memory card. DPOF-compatible printers, sometimes available at photo shops, can read the information from the card for convenient printing.

EV (Exposure Value)

All the combinations of the camera's shutter speed and lens aperture that result in the same exposure.

EV Compensation

This feature allows you to quickly adjust the exposure value measured by the camera, in limited increments, to improve the exposure of your photos. Set the EV compensation to -1.0 EV to adjust the value one step darker and 1.0 EV to one step brighter.

Exif (Exchangeable Image File Format)

A specification to define an image file format for digital cameras created by the Japan Electronic Industries Development Association (JEIDA).

Exposure

The amount of light allowed to reach the camera's sensor. Exposure is controlled by a combination of the shutter speed, the aperture value, and ISO sensitivity.

Flash

A speed light that helps to create adequate exposure in low-light conditions.

Focal length

The distance from the middle of the lens to its focal point (in millimeters). Longer focal lengths result in narrower angles of view and the subject is magnified. Shorter focal lengths result in wider angles of view.

H.264/MPEG-4

A high-compression video format established by international standard organizations ISO-IEC and ITU-T. This codec is capable of providing good video quality at low bit rates developed by the Joint Video Team (JVT).

Image sensor

The physical part of a digital camera that contains a photosite for each pixel in the image. Each photosite records the brightness of the light that strikes it during an exposure. Common sensor types are CCD (Charge-coupled Device) and CMOS (Complementary Metal Oxide Semiconductor).

ISO sensitivity

The sensitivity of the camera to light, based on the equivalent film speed used in a film camera. At higher ISO sensitivity settings, the camera uses a higher shutter speed, which can reduce blur caused by camera shake and low light. However, images with high sensitivity are more susceptible to noise.

JPEG (Joint Photographic Experts Group)

A lossy method of compression for digital images. JPEG images are compressed to reduce their overall file size with minimal deterioration of the image resolution.

LCD (Liquid Crystal Display)

A visual display commonly used in consumer electronics. This display needs a separate backlight, such as CCFL or LED, to reproduce colors.

Macro

This feature allows you to capture close-up photos of very small objects. When using the macro feature, the camera can maintain a sharp focus on small objects at a near life-size ratio (1:1).

Metering

The metering refers to the way in which the camera measures the quantity of light to set the exposure.

MJPEG (Motion JPEG)

A video format which is compressed as a JPEG image.

Noise

Misinterpreted pixels in a digital image that may appear as misplaced or random, bright pixels. Noise usually occurs when photos are shot with a high sensitivity or when a sensitivity is automatically set in a dark place.

Optical zoom

This is a general zoom which can enlarge images with a lens and does not deteriorate quality of images.

Quality

An expression of the rate of compression used in a digital image. Higher quality images have a lower rate of compression, which usually results in a larger file size.

Resolution

The number of pixels present in a digital image. High resolution images contain more pixels and typically show more detail than low resolution images.

Shutter speed

Shutter speed refers to the amount of time it takes to open and close the shutter, and it is an important factor in the brightness of a photo, as it controls the amount of light which passes through the aperture before it reaches the image sensor. A fast shutter speed allows less time to let light in and the photo becomes darker and more easily freezes subjects in motion.

Vignetting

A reduction of an image's brightness or saturation at the periphery (outer edges) compared to the center of the image. Vignetting can draw interest to subjects positioned in the center of an image.

White balance (color balance)

An adjustment of the intensities of colors (typically the primary colors red, green, and blue), in an image. The goal of adjusting the white balance, or color balance, is to correctly render the colors in an image.

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

PlanetFirst represents Samsung Electronics' commitment to sustainable development and social responsibility through eco-driven business and management activities.

Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

This Class [B] digital apparatus complies with Canadian ICES-003.

FCC notice

- **NOTE:**

  This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorientate, or relocate, the receiving antenna.
  - Increase the distance between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio / TV technician for help.

- **CAUTION:**

  Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

- **Declaration of Conformity**

Trade Name	: Samsung Electronics America, Inc.
Model No.	: Samsung PL170/PL171
Responsible Party	: Samsung Electronics America, Inc.
Address	: 85 Challenger Road, Ridgefield Park, NJ 07660
Telephone No.	: 1-800-SAMSUNG (726-7864)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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Please refer to the warranty that came with your product or visit our website http://www.samsung.com/ for after-sales service or inquiries.